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THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled IDENTIFYING THE POLICY IMPLICATIONS OF EMERGENT PROGRAMME ISSUES IN THE BRITISH COLUMBIA COLLEGE SYSTEM submitted by JOHN DONALD BRIAN TUNSTALL in partial fulfilment of the requirements for the degree of Doctor of Philosophy in Educational Administration.

[redacted]

Date: April 28/88

DEDICATION

In loving memory of
WILLIAM and KATIE LOUISE JAMIESON
whose interests and example
provided a beacon for my
academic pursuits.

ABSTRACT

The purpose of this study was to identify several important programme issues emerging in the British Columbia college system. In this context, programme issues were considered to be surrogates of the real goals and objectives of the colleges. A primary assumption underlying the approach taken in the study was that the issues identified were in fact a true reflection of the priorities needing attention over the five year period from 1986 to 1991.

The methodology employed in this study was based in the main on the use of the Delphi technique. The particular form of Delphi used most closely resembled a policy Delphi. The twenty-four panel members selected for the study came from three distinct sub-groups of college planners and managers: officials from the Ministry of Advanced Education and Job Training, chief executive officers from the colleges, and senior instructional administrators also from the colleges. The methodological features of the study included: a systematically selected panel; a semi-structured open-ended interview format; opportunities to clarify reasons for importance, adjust ratings and synthesize ideas; and a final report that discussed strategies and policy implications.

The major findings of the study provided answers to

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The major findings of the study provided answers to

the four research questions that guided the investigation. They included the identification of priority issues; a comparison of panel sub-group ratings; the identification of strategies for addressing priority issues; and, the identification of twelve metapolicy proposition statements. The metapolicy proposition statements were drawn by the researcher from the material collected in the fourth round interviews. Each of the proposition statements was accompanied by a number of specific suggestions for action. The statements and the suggestions were intended as guides for policy makers, they are not intended to be specific policy options.

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This thesis results from the collective efforts of a number of people. In reality, there are many more than I can adequately recognize on this page. Nevertheless, I would like to express my sincere appreciation to a select few who have made special contributions.

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CHAPTER I

INTRODUCTION

Postsecondary education in British Columbia is characterized by its comprehensiveness and diversity. The range of publicly supported educational organizations includes three universities; fifteen community and regional colleges; an institute of technology, an open learning institute, a justice institute, a college of art and design, a marine training institute, and an educational broadcast network. Within that broad spectrum of educational enterprises, perhaps no other type of organization illustrates the diversity and comprehensiveness better than the community and regional colleges. This study focussed on programme related issues in the publicly supported colleges of British Columbia.

Background

Publicly supported community and regional colleges have had a relatively brief history in the province of British Columbia. Most have been in existence for less than two decades. From very early in their development, however, the popularity of the colleges exceeded expectations. According to Dennison (1979), most, if not all colleges, experienced rapid growth during the early years. By the middle of the 1970s, British Columbia had a

loosely-coupled network of community and regional colleges scattered throughout the province offering a comprehensive range of programmes and services to the public.

In this early phase of college development, considerable emphasis was placed on a community, regional or local orientation (Dennison and Gallagher, 1986). Colleges were expected to respond to the educational needs of their communities and regions as those needs were determined at the individual institutional level. Dennison and Gallagher (1986, p. 179) observed: ". . . priority was placed on the decentralization of power and responsibility for postsecondary education."

By the end of the 1970s, however, public support and government enthusiasm for postsecondary education was beginning to wane. Concern for curbing the ever-increasing pattern of public expenditure and for developing better mechanisms of accountability in the public sector came to overshadow the principle of universal accessibility to postsecondary educational opportunities. New patterns of institutional governance began to emerge; ones in which increasing emphasis was placed on the centralization of control through the coordination of college operations.

The move toward increasing coordination and control of postsecondary education by central authorities was not unique to British Columbia. Worth (1974) noted that the need for large-scale planning had fostered a move toward

system coordination in many jurisdictions throughout the Western world. The growing size and complexity of educational programmes and services, coupled with the desire to maintain a greater level of control over rapidly-increasing fiscal expenditures, was a common motivation behind the drive to centralization (Callan and Jonsen, 1980). In the British Columbia context (see chapter III), the move toward system was comparatively rapid and by the early 1980s the community and regional colleges had become part of a provincial system of publicly supported nonuniversity postsecondary institutions.

One feature of this newly coordinated system in British Columbia was an increasing emphasis on strategic planning. Each college in the system was required to produce a five-year plan using a common set of planning assumptions specified by the central coordinating authority, the Ministry of Education. In addition to the specified assumptions, the Ministry of Education issued a system-wide mission and goals statement for the 1982-1987 planning period. That document was subsequently revised and reissued in 1986 to cover a new planning cycle from 1986-1991.

This latest system-wide statement of mission and goals was intended to act as a guiding framework for the development of the colleges. Accordingly, it serves the same function as Dror's (1971) conception of megapolicy.

Megapolicy sets the overall tone and provides a sense of direction for the development of subsequent policy elements within the system.

Statement of the Problem

Using the recently revised system mission and goals statement as a backdrop, this study sought to identify the priority issues that are expected to emerge in specific programme areas in the colleges during the 1986-1991 planning cycle. Four specific research questions guided this endeavour:

1. What are the priority issues that are expected to arise in the programme areas of British Columbia colleges during the 1986-1991 planning cycle?
2. How do the views of Ministry of Advanced Education and Job Training officials, college chief executive officers, and college senior instructional administrators compare with respect to the identification of emerging programme issues?
3. What strategies might colleges employ to address the priority issues?
4. What metapolicy propositions, if any, can be established from the priorities identified?

Significance of the Study

The findings of this research have significance in that they offer practical considerations for the administration of colleges and supporting evidence for specific theoretical conceptions about the politics of education.

Contributions to System and Institutional Administration

The metapolicy propositions drawn from the findings of this research provide college administrators at the system and individual institution level with a perspective on selected issues facing the colleges. Each proposition is accompanied by a list of specific suggestions for action. Neither the propostions nor their accompanying suggestions for action are intended as specific policy alternatives. Rather they are meant to provide background to the policy environment so that decision-makers are more aware of the range of context in which they must function.

For almost a decade higher education in Canada has experienced an increasing demand for change. Public confidence in postsecondary education, which was so strong during the 1960s and early 1970s, has been seriously eroded. No longer is society prepared to regard the degree or diploma as an assurance of certain employment and economic reward. The attraction of acquiring better job opportunities and higher salaries through more advanced education clearly had lost some of its appeal. As Dennison (1984, p. 144) observed:

> The spectre of the unemployed university or college graduate, as often portrayed by the mass media, became an issue. Although the validity of the concern was open to question, and indeed the employment statistics presented a different story, support for tertiary education was adversely affected.

Reflecting this decline in public confidence, politicians tended to place a lower priority on higher education than in previous years. This tendency, combined with the downturn of the economy in the early 1980s and the growing pressure to curtail government spending, served to constrain the level of fiscal support for publicly funded postsecondary institutions in British Columbia.

During the last decade a number of important demographic changes have occurred. The population of secondary school age students decreased, resulting in fewer high school graduates. Indeed, Tansig (1981) speculated that even when the economy picks up again, it is probable that the participation rate of the 18-24 age group enrolled in postsecondary institutions will remain relatively stable or continue to decline. Evidence to support Tansig's arguments have not been forthcoming in the very early phases of the economic recovery in British Columbia. Participation rates have maintained their previous levels or, in some cases, have actually increased in the 1987/88 academic year [see enrollment estimates, Ministry of Advanced Education and Job Training, 1987]).

The drop in potential students in the 18-24 age group has been partially offset by an increasing demand for educational opportunity by mature students. Frequently, however, these adult students have been looking for part-time opportunities. The demands they make on postsecondary

institutions are often quite different from those made by the traditional full-time student.

Faced with the prospect of declining public confidence in education, decreasing fiscal resources, and a changing student profile it is imperative that institutions of higher education consider new ways of conceptualizing their purposes and developing new administrative processes relevant to those purposes (Sullivan 1982). Policy-makers at the institutional and system levels must have a clear idea of the essential priorities in the system if they are to make policy decisions that will help institutions meet the educational needs in tomorrow's society. Leaders at all levels in the education system must be able to define the role and purpose of the various institutions and to articulate these to elected officials, the public and prospective students. This task is of crucial importance for the colleges. For as Dennison and Gallagher (1986) argued:

> Canada's colleges will thrive only to the extent that they serve their many publics and give evidence of their commitment to the broadest possible public accountability.

Contributions to theory

Easton (1965) has defined politics as the set of interactions that influence and shape the authoritative allocation of values. Given this definition, the metapolicy propositions arising from this research are

centrally concerned with the politics of community college education in British Columbia. Thus, this study offers an opportunity to test two major theoretical perspectives on the politics of education. Weeres (1984) has identified resource dependency and institutional isomorphism as two prominent theoretical models in the literature. Both models are reliant on an open systems view of colleges as organizations.

All publicly funded postsecondary educational institutions can be viewed as resource dependent organizations subject to the control and influence of external forces. The relevant forces of external control and influence in the environment in which community colleges operate are those related to legislative appropriations and regulations, community perceptions and approval, and student/consumer preferences (Doucette, 1983). Pfeffer and Salancik (1978) described the major issues confronting resource dependent organizations as primarily those of knowing the external environment and of assessing external demands made by that environment.

A second theoretical conception of institutional politics is termed institutional isomorphism (Weeres, 1984). This theory views institutional politics as a function of homogenizing processes. Over time community colleges will tend to be increasingly similar in structure, function, and policy as they strive to attain legitimacy,

status, power and resources (Adler, 1987). The central concern in this theory is with explaining why colleges tend to be the same rather than focussing on their differences.

The research provides empirical findings that were examined from the perspective of the theories outlined above. To the extent that each theory provided some assistance in interpreting the findings of this study, their explanatory power was partially tested.

Definitions

The following terms and phrases are defined because of their specific application in the study:

Mission

The mission statement describes the basic purpose of the college system or individual college, that is, what the system or institution is trying to accomplish (Kotler and Murphy, 1981). In the context of this study, mission statements serve to express to external constituencies what the system or institution hopes to accomplish in response to the support and expectations of society (Fenske, 1980).

Goals

According to French, Kast and Rosenweig (1985), goals are representations of future conditions that individual groups, or organizations desire and strive to achieve. Goals are more specific than missions, and usually include

reference to a clientele being served, a process, and an outcome or outcomes (Fenski, 1980).

Objectives

Fenske (1980) defined objectives as much more specific than goals. Objectives are often characterized as being precise, specific, behavioral, measurable and understandable to those affected by them.

Programme Issues

Hogwood and Gunn (1984) have observed that all organizations in the public sector employ a variety of methods, both formal and informal, to identify possible problems, opportunities and threats to the organization. These authors have defined problems, opportunities and threats as issues, a definition which is consistent with the use of the term "issues" in this research. Given that the raison d'être of colleges is the delivery of programmes of courses and related services, the term programme issues was used to define problems, opportunities and threats that may impact on the delivery of programmes in the college context.

Strategies

Systematic organizational responses to the programme issues are termed strategies. Lozier and Chittipeddi (1986) identified the concept of initiating suitable responses for managing issues as a critical link in the

issue management process. In this research the term strategies was used to refer to suggestions received for dealing with the high priority programme issues.

Megapolicy

Dror (1971) defines megapolicies as master policies used to provide guidelines and direction for the development of a set of subsequent policy statements. In this research the system mission and goals statement distributed by the Ministry of Education in 1983 and the revised statement of 1986 were considered as megapolicies providing guidelines within which individual college mission and goals statements would be developed.

Metapolicy Propositions

Dror (1971) refers to metapolicy as policy on policy-making, that is, policy dealing with characteristics of the policy-making process. Metapolicy propositions are overriding statements or considerations which should be taken into account in the policy-making process.

British Columbia College System

The system referred to in this study was a subsystem of the British Columbia College and Institute system. It included the fifteen community and regional colleges but did not include the five nonuniversity provincial institutes. Nor did the study attempt to include the three

provincial universities. The qualifiers "regional" and/or "community" are sometimes used throughout the text with the term college. These terms are used interchangeably in the context of this discussion and are not intended to imply any significant differentiation between the two.

Ministry of Advanced Education and Job Training

This was the title of the government ministry responsible for overseeing all publicly supported postsecondary education in the Province of British Columbia at the time of writing. During the progress of the research reported here, the title and scope of the Ministry changed several times. At various times in the two years, the Ministry was called the Ministry of Education, the Ministry of Postsecondary Education, the Ministry of Continuing Education, and the Ministry of Advanced Education and Job Training. Throughout the study the title of Advanced Education and Job Training has been used with the exception of reference to specific reports, documents or correspondence that have been issued under different titles. These items were credited to the correct title of the Ministry at time of distribution.

Delimitations, Assumptions, and Limitations

This research was bounded by the delimitations, assumptions, and limitations reported in the paragraphs below.

Delimitations

This study was delimited by the fact that it has focussed on the British Columbia college system. Similarly, it must be interpreted in a particular political, social, economic and time context. No attempt was made to generalize the findings of this research to the larger context of colleges in other jurisdictions or to the British Columbia system in other temporal settings.

A second delimitation for the study involves the scope of the investigation. The focus for issue identification was on the outcome or programme areas of the colleges. It was recognized that there were a wide range of other issues in the British Columbia college setting that could have been investigated, but these were left to other investigations.

Assumptions

Three major assumptions are implicit in the design of this study. The first is that a Delphi methodology using a panel of twenty-four members was a legitimate way to identify the programme issues likely to emerge over a five-year planning horizon. Second, it was assumed that the individuals selected to participate on the Delphi panel were representative of the major constituencies of influential managers in the system and that they were sufficiently conversant with the major programme issues

emerging within the system. A third, is that the priorities identified by the panel will be an accurate reflection of the actual priorities needing attention over the next planning cycle.

Limitations

One limitation of this study was that, of necessity, it relies on a single researcher to monitor the Delphi process. By virtue of the task at hand this limitation was unavoidable. Where possible and appropriate, however, other knowledgeable individuals were invited to assist the researcher (see the discussion on reliability in Chapter IV). Another limitation involves the small size of the Delphi panel. In order to pursue the study design, and to maintain the feasibility of a single researcher completing the project on his own, the panel size was kept to a manageable limit. Yet another limitation on the research concerns the degree to which the data gathered relies heavily on the perceptions of the panel participants. Care was taken in the selection of panel participants and in the design of the research procedures to enhance the trustworthiness of the findings.

A final, and major, limitation to this study was the degree to which the future is uncertain. No one can ever be certain of the degree to which issues which appear to be emerging priorities today will reflect those that actually

arise in the future. For this reason the study did not venture beyond the five-year planning horizon which colleges were asked to consider in their strategic planning.

Outline of the Thesis

The thesis has been organized in the following manner:

Chapter I has included an introduction, a statement of the problem, a discussion of the significance of the research, an outline of definitions used and a discussion of the delimitations, assumptions and limitations of the study.

Chapter II presents a review of the literature and a conceptual framework for the study. The literature review focusses on an examination of mission, a review of the concept of goals and objectives and outlines the case for new approaches to the study of college mission and goals.

Chapter III establishes the context and setting of the research undertaken in this study. An outline of the historical development of the college system and highlights of the more recent developments that have occurred in the college system are provided.

Chapter IV describes the methodological framework, research design and research procedures of the study. A detailed discussion of the Delphi technique is presented,

including the concept of intuitive forecasting, definition of the Delphi and consideration of its strengths and weaknesses, a review of Delphi applications in postsecondary research and the use of the technique as it was employed in this study. The remainder of the chapter offers an extensive outline of the research design and procedures used to conduct the study.

Chapter V provides an analysis of the findings of this inquiry. The content of the chapter includes a discussion and analysis of the data gathered for each of the four rounds in the Delphi process.

Chapter VI considers the policy implications of the research. Metapolicy propositions are developed for each of the major issue clusters identified throughout the earlier rounds of the study.

Chapter VII summarizes the study, following which some conclusions from the investigation are drawn, and implications from the study, including implications for further research are identified.

CHAPTER II

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

This chapter is organized into four sections. The first section discusses the concept of mission as it applies in a community college context. Alternate conceptions of college missions are reviewed and the need to establish priorities for the future is highlighted. The section concludes by underscoring the importance of a clearly defined mission in the operation of a successful organization. The second section focusses on an examination of organizational goals, particularly as they relate to human service organizations. The definition and function of goals in organizations, and an examination of the process of goal setting and change are discussed in this section. The third section includes a discussion of goals in postsecondary organizations and a review of selected research on missions and goals in the postsecondary environment. In the final section a conceptual framework for the research undertaken in this study is presented.

The Mission of a College

During the late 1970s and the early part of the 1980s a number of writers called for a critical reassessment of the community college role (see, for example, Cohen and Lombardi, 1979; Richardson and Leslie, 1980; and Cross, 1981). McCartan (1983) analyzed this literature and

identified at least two distinctly different visions for the future of the community college. On the one hand, there are those who advocate the continued expansion of community college roles into new frontiers of the teaching-learning environment of their communities. These writers argue that it is imperative that community colleges remain ever-sensitive and responsive to the changing needs of their communities, particularly if they are to maintain strong linkages with those communities.

On the other hand, an alternate vision for the future is one which puts forward a strong case for consolidating the role of the community college around those strengths that have characterized traditional higher education in the past. Supporters of this vision contend that without consolidation the contemporary community college runs the risk of losing its identity, and more importantly, its much needed public support.

In her examination of the same literature from a slightly different perspective, Cross (1985) recognized five major themes that run through the current debate on community college missions. She identified them as follows: (1) the comprehensive focus, (2) the vertical focus, (3) the horizontal focus, (4) the integrated focus, and (5) the remedial focus. The comprehensive focus refers to an emphasis on the complete range of programme categories commonly found in the community college setting.

These categories typically include occupational preparation, academic transfer, compensatory and remedial education, community education, and general education. The vertical focus can be roughly equated with an emphasis on the transfer function linking secondary education with upper level undergraduate education. The horizontal focus emphasizes the links the community college can make with the wider community. The integrated focus places an emphasis on the internal linkages that can be made within the traditional collegiate setting. Finally, the remedial focus places a primary emphasis on providing adults, young and old alike, with a second chance to acquire the skills and abilities to function as productive citizens.

In the remaining paragraphs of this section the two major positions identified by McCartan (1983) are briefly reviewed. Reference is made to the five themes identified by Cross (1985) as appropriate. The section concludes with a discussion of the need to determine priorities for the community college in order to ensure its survival.

College for Community

The concept of a community college being primarily responsive to the learning needs of its community setting is not a new one. The origins of this philosophical position spring not so much from the traditional roots of higher education, the university, as it does from the

Chautauqua movement in the American mid-west (Harlacher, 1981). This position most closely corresponds to the horizontal and remedial themes identified by Cross (1985). The writers who advocate this position fear that if the community college abandons its community-based focus the community could stand to lose one of its most potent tools for community renewal. Harlacher (1981, p. 57) captured the spirit of their concern when he asserted:

> The community would be denied access to its major source of educational opportunity: the flexible, service-oriented institutions through which young people and adults engage in lifespan learning, enhance their civic knowledge, or improve their job skills.

The notion of being responsive to ever-changing community needs can imply more than simple adaptiveness and flexibility. Worth (1972, p. 55) asserted that it "means providing leadership-service in the solution of special regional problems, and in the anticipation and direction of future events." Gollattscheck and associates (1976) proposed that the community college should become an agent for social and economic renewal within its community. They were strong proponents of the community renewal college as a proactive community force to enhance the social and economic quality of life in American communities.

In a similar vein, Vogler (1984) argued that community colleges are ideally situated to establish linkages with business and industry. Samuels (1985) provided an example

of one such linkage in his discussion of partnerships between community colleges and business and industry around the delivery of occupational upgrading and retraining opportunities. Given the emerging interest of business and industry in human resource development and the impact of technological change on the contemporary workplace, community colleges have a clear opportunity to establish creative partnerships with this important sector of their communities.

Other writers have consistently championed the role of community colleges in providing remedial and support programmes and services to the increasing numbers of new, non-traditional, and high risk students (Roueche and Snow, 1977; Cross, 1971, and 1976). Walsh (1979) proposed that the community college should assume an expanded role in providing a wide variety of specialized educational services that cater to special interest clientele including older adults, handicapped adults, and women re-entering the workforce. A report from the Carnegie Council on Policy Studies in Higher Education (1979) recommended that community colleges assume a greater responsibility for the provision of services to youth, particularly unemployed and unemployable young people. The President of the Council, Clarke Kerr (1980), highlighted the importance and urgency of this role for the community college during his address to the annual convention of the American Association of

Community and Junior Colleges in San Francisco. Kerr maintained that the traditional roles of the community colleges might have to decline as these new roles assume greater importance.

No discussion of the community college for the community would be complete without recognition of one of its chief spokespersons and advocates, Edmund J. Gleazer Jr.. More than anyone else, Gleazer argued for a meshing of the community college and the community (Vaughan, 1981). During his twenty-three year term as president of the American Association of Community and Junior Colleges, Gleazer was one of the driving forces behind the continued expansion of the community colleges' mission. In his book, The Community College: Values, Vision, and Vitality, Gleazer (1980) clearly articulated his viewpoints on the role and purposes of community colleges in contemporary society. According to this view the central mission of community colleges ought to be to become centres of lifespan or lifelong learning, ever changing to meet new and emerging community needs.

Community College as College

Other writers have maintained that community colleges have strayed too far away from their appropriate missions (McLendon, 1981). The main argument from this perspective is that community colleges have come to be viewed by

community members and politicians as educational smorgasbords, offering everything to everyone, and in the minds of some critics at least, doing nothing particularly well. Among the proponents to argue this position are those Cross (1985) associates with the vertical and integrative foci for college missions.

Robert H. McCabe, president of Miami-Dade Community College in Florida, is a proponent of the vertical focus for college missions. McCabe has attracted nation-wide attention in the United States by his outspoken and action-oriented advocacy of the collegiate model for the community college. He has placed a renewed emphasis on high academic standards within his institution and he has advocated the maintenance of a strong general education component as the central core of all community college programming. Since 1978, when McCabe first instituted his controversial policies, Miami-Dade college has suspended nearly 11,000 students for unacceptable academic progress. Although this might appear to be a rather drastic policy, McCabe reported that the students are supportive of the imposition of higher expectations (Dubocq, 1981). McCabe and Skidmore (1983, p. 242) outlined the philosophy thusly:

> In order to successfully meet the important needs of our society, there must be a complete shift of emphasis away from the 1960s mentality that still dominates much of community college activity. At the same time, there must be a shift from concern with program completion to an

> emphasis on high achievement and maintenance of standards. The goal should be excellence for everyone.

Perhaps one of the most outspoken critics of the trend towards continuously shifting roles and unbridled expansion of community college offerings has been Arthur M. Cohen. Unlike McCabe, Cohen argues for a more integrative focus for college missions. In an article with John Lombardi (1979) and more recently in a major book with Florence Brawer (1982), Cohen has been highly critical of the community-based education approach. According to Cohen and Brawer (1982, p. 329):

> A publicly supported college cannot operate indefinitely with the curriculum perceived as a set of haphazard events, a corps of part-time instructors with no commitment to the institution in general, let alone to the planning of curriculum in particular, and students who drop in casually if they have nothing better to do that week. Such an institution may continue functioning, but it has lost its guiding ethos.

It is not so much that these authors were against the notion of comprehensive programming in the community college as they were opposed to the undermining of the traditional programme emphasis and programme standards. Cohen called for a refocussing on the traditional mandate of the community college. He believes that the college should not attempt to be all things to all people, rather the college should attempt to do what it does best, and to concentrate on doing it well.

Cohen and Brawer (1982) maintained that the primary

focus for the community college should be on a strong general education programme, taught by competent professional educators. A decade earlier Worth (1972) argued for a similar role for Albertan community colleges. General education in the view of these authors should be at the hub of collegiate, career, compensatory, and community education programmes. Such education would be "holistic, not specialized; integrative, not fractionated; and suitable more for action than for contemplation" (Cohen and Brawer, p. 312).

The Need to Set Priorities

Given the decline of public support for higher education referred to earlier, it seems clear that the continued confusion and ambiguity about the role and purpose of the community college may be detrimental to their continued development. The tension between mission and funding promises to become more pressing in the 1980s as resources for community colleges become less plentiful than in previous decades (Breneman and Nelson, 1980). Other writers have echoed similar concerns (Dennison, 1984; Richardson and Leslie, 1980 and Berry, 1983). Dennison (1984) pointed out that strategic decisions must be made about the role and purposes of the community college so that future directions can be charted.

Breneman and Nelson (1980 and 1981) examined the

central economic questions of equity and efficiency as well as the role of state, local, and federal governments in financing community colleges. These writers identified three strategic choices for future community college missions to pursue: (1) continuing with the comprehensive mission that has evolved over the past twenty years, (2) dropping the community services mission and concentrating on credit programmes in transfer and occupational areas with general education requirements for all students, or (3) becoming community learning centres with decreased emphasis on traditional programmes and full-time students and increased emphasis on lifelong learning activities and part-time students.

Breneman and Nelson (1981, p. 213) provided a note of caution about the first of these options:

> Perhaps the greatest risk of an unflinching commitment to the comprehensive mission is that sufficient financial support will not materialize, and the college will suffer across the board, becoming less competitive and less distinctive in all program areas. To opt for comprehensiveness is to gamble that sufficient support will be forthcoming to render unnecessary hard choices among program priorities.

In an earlier article these same authors (1980, p. 80) made the point even more directly:

> Shrinking resources may force the choice between remaining part of traditional higher education or moving to become a community-based service organization. It may no longer be possible to have it both ways.

The situation is far from clear in that no matter what direction is chosen it will not be without some risk. For example, if it is true that traditional collegiate education will be a declining industry in the 1980s and 1990s then there is limited appeal to pursuing that direction too narrowly. On the other hand, the risk of moving too far away from traditional collegiate education is that adequate public support for lifelong learning and community learning centres may fail to materialize. Both of these pressures appear to favour a diversified strategy not unlike the comprehensive curriculum of the past. As Breneman and Nelson (1981) concluded, none of the three broad strategies charts an obvious or easy course for the future. Clearly, community college leaders and decision-makers at every level must continue to respond to the uncertainty and challenges in diverse ways, depending on the particular circumstances at each institution. The challenge for policy-makers at the system level will be to provide sufficient direction to ensure overall efficiency and effectiveness while at the same time allowing individual institutions to accommodate to the particular needs within their constituencies as they best see fit.

Given substantial differences from one community to the next and from one institution to another, it is not surprising that Richardson and Leslie (1980) argued for the need to define institutional missions in clear and

unambiguous operational terms. Doing so becomes increasingly critical as declining resources put continued pressures on institutions to make decisions. The need to eliminate confusion over what it is that community colleges do is paramount, particularly as the hard task of assigning priorities is being achieved. Martin (1985) commented that a good mission statement is as important to a college as is good management. A clear mission statement provides a guide for the operation of the college and all those who work in it (Dressel, 1987). For, as Martin (1985, p. 61) concluded:

> Despite its flights of rhetoric and sweeping generalizations, a good mission statement informs behaviors and helps members of the community decide when to say no and when to say yes.

In this section community college missions have been discussed. Alternate strategic choices have been identified along with the risks associated with each of these choices. Finally, an argument was put forward for the need to define community college missions in operational terms in order that priorities might be established. In the next section the concept of organizational goals in postsecondary education is examined.

The Concept of Organizational Goals

The term "mission" is often used interchangeably with "function," "purpose," "role," "goal," "objective,"

"scope," and "aspiration" (Doucette, 1983). While there does not appear to be a clear consensus on how these terms are used in the literature, common convention appears to recognize a hierarchy of at least three levels. Mission is frequently used to denote the most general term in the hierarchy, objective the most specific, and goal somewhere between the two.

The empirical and theoretical research on organizations has tended to be concentrated at the goal level. Fenske (1980, p. 178) asserted, "one of the few things organizational theorists agree on is the necessity of defining and studying goals." He maintained that goals are an appropriate level on which to focus a discussion of institutional purpose because goals have implications for the two remaining levels. In a similar fashion, Hambrick (1976, p. 45) highlighted the importance of goals in organizational settings in the following manner:

> No aspect of an organization's strategy, structure, or operation policies can be intelligently discussed or rationalized without a firm understanding and analysis of the unit's goals.

In terms of postsecondary organizations, Richman and Farmer (1974, p. 335) claimed, "systematic consideration of the goals problem seems to be the most important thing that an academic manager or administrator should be doing now." This advise seems particularly pertinent in the contemporary context of Canadian postsecondary education.

Goals not only provide an educational institution with a sense of direction, a frame of reference for its activities, and a means by which to evaluate progress and change, they also help to explain and interpret the institution to its various publics.

Defining Organizational Goals

The concept of goals is commonly introduced in the study of organizations to denote the particular ends towards which organizational behaviour is directed. Thus Etzioni (1964, p. 6) defined goals as "a desired state of affairs which the organization attempts to realize." In a later work Thompson (1967, p. 127) stated:

> We use goal to refer . . . to some imagined state of affairs which may conceivably be attained or approached (if not finite) at some future time.

Hall (1975, p. 63) noted that both of these definitions contain two critical elements in common: "(1) goals describe future attainments to which, (2) present efforts or commitments are made." These characteristics have been emphasized by Gross (1968, p. 266) as key aspects of purposefulness:

> Without some commitment, a perceived future situation is far from being a purpose . . .. Purpose emerges only when there is some will, some actual effort to bring about the desired situation.

Organizational goals imply more than good intentions for future achievements, there must be some effort or commitment

to fulfill the intent.

In order to avoid the problem of reification of organizations, it is important at this point to remind ourselves that organizations are made up of people. Hall (1975, p. 64) helped to clarify the relationship between commitment and organizations when she stated:

> While organizations per se cannot have intentions or make commitments, persons who act in the name of organizations can . . .. [We] can approach [those] who are responsible for committing . . . organizational policies and allocating . . . resources for the attainment of some future end or state of affairs.

Thus, it is not necessary to attribute personal qualities to organizations in order to discuss organizational goals. It is necessary, however, for some members of the organization to have more than good intentions. At least some of those who act in the name of the organization must have a commitment to a particular course of action before intended goals can be considered real goals.

This distinction between intentions and actions stems from the work of Perrow (1961) who distinguished between official goals and operative goals. Official goals are the general purposes of the organizations as set out in charters, annual reports, public statements by key executives, and other authoritative pronouncements. They are the intentions of the organization. Official goals are often left purposefully vague and general; they rarely account for the host of decisions that must be made among

alternatives and priorities. Nor do they account for the many unofficial goals pursued by different groups within an organization. In order to account for this second set of goals, Perrow (1961, p. 855) introduced the term operative goals:

> Operative goals designate the ends sought through the actual operating policies of the organization. They tell us what the organization is trying to do, regardless of what the official goals say are the aims.

Etzioni (1964, p. 7) made the same distinction between official, or what he refers to as "stated" goals, and the operative, or "real" goals in an organization. Real goals are "those future states towards which a majority of the organization's means and the major commitments are directed" (Etzioni, 1964, p. 7). Etzioni claimed that in the case of a conflict between real and stated goals, oftentimes real goals will be given clear priority. This is especially the case when the stated goals of an organization command only limited support.

The Functions of Goals in Organizations

Etzioni (1964) pointed out that goals serve many functions in organizations. They provide orientation by depicting a future which an organization is striving to realize. They set down guidelines for organizational activity. Goals also constitute a form of legitimacy which justifies the activities of an organization. Moreover,

goals serve as standards by which the members of an organization and outsiders can assess the success of the organization.

The way organizational goals are designed will depend, at least in part, on the role they are to perform in the organization. Scott (1987) identified two major categories of goal statements, cognitive and emotive. Not only do organizational goals differ in the functions they serve, they may also emanate from different sources. Managers are likely to emphasize the cognitive functions of goals since they are the primary way in which supervisors can direct and evaluate the performance of their subordinates. Emotive goals, on the other hand, are likely to be promulgated at the institutional level of the organization, as members seek to legitimize organizational purposes by stressing their larger societal functioning.

Perrow (1970) identified the need for a functional classification of organizational goals according to whether their referent outcomes are internal or external to the organization. Mohr (1973) proposed such a two-category scheme which included transitive goals and reflexive goals.

Transitive goals are those which represent an impact of the institution on its external environment. The nature and extent of the impact for a human service organization can be determined by examining the programmes of that organization. Each programme is designed to produce a

product or a service which in turn is transferred to the environment, thereby having some desired impact on that environment. In order for a product or service to be considered a transitive goal, it must be more than a mere activity of the organization; it must have an intended consequence for the environment. It must bring about change or actively ensure the continued maintenance of some condition in the environment. Mohr recognized that any given organization may have more than one goal as reflected in the variety and number of programmes that the organization has going simultaneously. The relative emphasis placed on each goal can be assessed by examining the resources which are committed to it.

Reflexive goals are those which tend to be turned back in on the personal needs and interests of the members of the organization. They are generally concerned with organizational maintenance and survival. Mohr (1973, p. 476) proposed that every organization tends to share a common general reflexive goal -- "that inducements will be sufficient to evoke adequate contributions from all members of the organizational coalition." Hasenfeld (1983, p. 94) helped to interpret Mohr's meaning thusly:

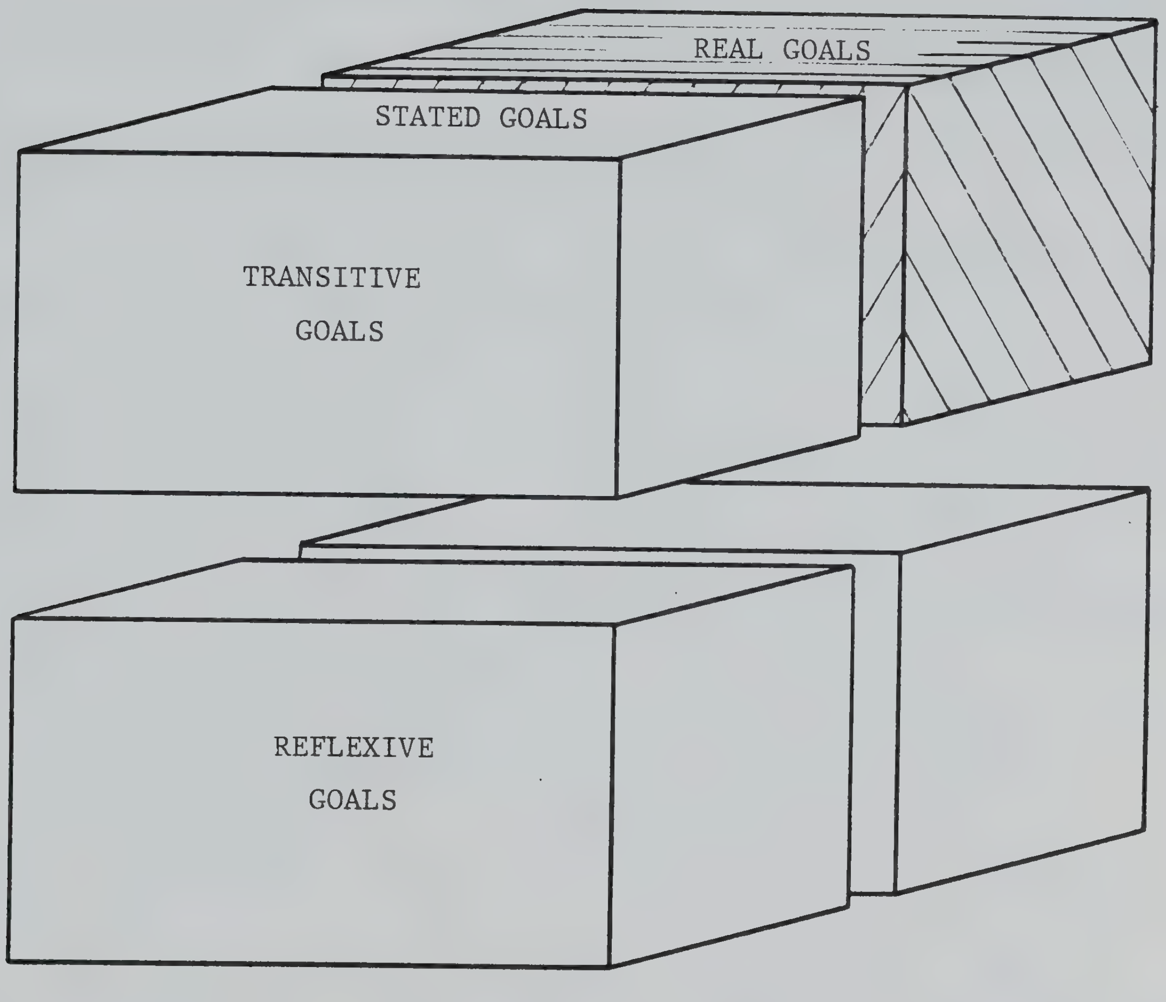
> . . . each organization must establish targets and procedures for the internal allocation of resources in order to induce members to make the necessary contributions to carry out the organization's activities. . . . Inducements may be related to salaries and wages, working conditions, status, power, and privileges.

According to Mohr (1973), from a social policy perspective, the transitive goals are of greater importance in an assessment of the organization. All the same, however, it is important to recognize that both transitive and reflexive goals may coexist, and in fact may be coequal, in most human service organizations. This coexistence of goal types is not necessarily harmful to the overall effectiveness of the organization. It can become so, however, when reflexive goals begin to command greater amounts of resources than transitive goals. When this situation occurs, the phenomenon of goal displacement may begin to arise. This concept is discussed in a later subsection in this chapter.

Using both Etzioni's and Mohr's conceptions simultaneously, it is possible to develop a simple model of organizational goals (see Figure 2.1). For the purposes of the research framework outlined in this chapter, the part of the model of greatest interest has been shaded. The primary focus is on real rather than stated goals, and on transitive rather than reflexive goals.

Goal-Setting and Goal Change in Organizations

Thompson and McEwen (1958) argued that goals appear to grow out of interaction, both within the organization and between the organization and its environment. This subsection examines various environmental and organizational



A Conceptual Model of Organizational Goals

Figure 2.1

factors that influence the goal-setting process. Particular attention is paid to the concept of the dominant coalition as a power base for influencing organizational decision-making. The latter part of the subsection briefly examines the processes of goal succession and goal displacement.

Organizational Goals and the Environment

Most organizations exist within a larger societal context. From an open systems perspective, large and complex organizations develop a vast net of linkages with the larger society to the point of becoming interdependent. Thompson and McEwen (1958, p. 23) examined the effect of this interdependence on the setting of organizational goals:

> The goal-setting problem . . . is essentially determining the relationship of the organization to the larger society, which in turn, becomes a question of what the society (or elements within it) wants done, or can be persuaded to support.

Thompson and McEwen pointed out that a constantly changing environment requires organizations to reappraise their goals continuously. Reappraisal, in turn, depends upon how easily goals can be measured. The more difficult the appraisal, the more likely it is that the organization will evade societal controls (Etzioni, 1969, p. 157).

Thompson and McEwen identified four forms of interaction within the organizational environment: competition, bargaining, co-optation and coalition. They illustrate how each form of interaction affects the way the

environment influences the selection of organizational goals. Ultimately, competition will eliminate organizations which insist on catering to goals that society is no longer prepared to support. Bargaining means that representatives of the environment become actual partners in the decision-making process within the organization. Co-optation enables the organization to gain the support of key individuals or groups in the environment by giving them a position of power and responsibility in the organization. Coalition forming limits the organization to the status of a committed partner in a larger unit. Any of these interactions with the environment can have the effect of curtailing the organization's ability to choose amongst alternative goals.

The Dominant Coalition

The classical economist's response to the question of who sets organizational goals is to point to the goals of the entrepreneur-owner. According to these economists, the goals of the organization are seen to equate with those of the owner as the dominant individual in an organization. An alternative model to explain the goal-setting process is to assume that goals are determined by consensus, that all participants share in the setting of an institution's goals. Scott (1987) rejected both of these models of goal-setting as exceptional patterns rarely observed in the real

world of organizations. In their place, Scott preferred an alternative conception of the goal-setting process first proposed by Cyert and March in 1963. Cyert and March (1963, p. 27) conceived of goal-setting as a negotiation process that occurs among members of dominant coalitions.

Most organizations, in the view of Cyert and March, are comprised of coalitions, that is, groups sharing certain interests. Each coalition attempts to impose its preferences (goals) on the larger organization. Typically, no single coalition is able to determine completely the goals of an organization on their own. Coalition members will seek out like-minded groups to form a larger, more dominant coalition. Similarly, they will negotiate with those groups whose interests are divergent but whose participation may be necessary to achieve dominance over the goal-setting process.

Coalition members may make "side-payments" to other groups or individuals in order to secure their cooperation. Each coalition whose interests must be taken into account helps to define the goals for the organization. The goals of the organization, according to this view, are primarily determined by those coalitions which are powerful enough to impose conditions and constraints on organizational decision-making and actions.

The Succession of Goals in Organizations

Earlier in this chapter, the observation was made that organizational goals constantly have to be reassessed in the light of changing environmental conditions. What happens, then, when primary organizational goals have been achieved or have been made irrelevant by changes in the social environment? Clearly, organizations can either face eventual dissolution, or they can remain intact for the purpose of working toward a new set of goals. This latter process has been termed the succession of goals (Sills, 1969). Goal succession means that the organization's original transitive goals have been successfully accomplished and that new goals have been selected based primarily on identifiable needs in the environment, not on organizational maintenance or survival.

New goals replace those that are no longer viable for the organization. The existing organizational structure can be used to accomplish these new goals. One danger inherent in this process, however, is that goals focussed on the maintenance of the organization can begin to take precedence over goals that are derived from the organization's mission or purpose. When this occurs in the extreme the term goal displacement is used to describe the situation.

Goal Displacement in Organizations

Goal displacement is a form of means-ends inversion. It results from a neglect of the professed goals of the organization in favour of the organization's continued existence as an end in itself (Warner and Havens, 1968). Sills (1970, p. 227) asserted that "goal displacement is perhaps the most frequently noted pathological aspect of large-scale organizations." He (1970, p. 227) explained the phenomenon in the following terms:

> In order to accomplish their goals, organizations establish a set of procedures or means. In the course of following these procedures, however, the subordinates or members to whom authority and functions have been delegated often come to regard them as ends in themselves, rather than as means toward the achievement of organizational goals. As a result of this process, the actual activities of the organization become centered around the proper functioning of organization procedures, rather than upon the achievement of the initial goals.

Goal displacement can have several sources within an organization. Sills' discussion of the topic centered around the characteristics of the people with delegated authority as the primary cause of the problem. An organization's goals, however, can also be an important contributor to goal displacement. Warner and Havens (1968, p. 540) noted:

> An important reason for the displacement of goals is the intangibility of the organizational goals. . . . Intangible goals are expressions of intended states of affairs that do not adequately describe the desired states or the activities that would contribute to their achievement.

These authors posit that if an organization's goals do not get translated into operational objectives of a tangible nature, then they may tend to be replaced by another set of goals which are more tangible and can be easily translated into operational outcomes. The concern here being that these new goals may be quite inconsistent with the original transitive goals of the organization.

Organizational Goals in Postsecondary Education

According to Anderson (1976), modern institutions of postsecondary education exceed all but the military and government in organizational complexity. Many postsecondary institutions emphasize a plurality of organizational purposes and goals. Fenske (1980) claimed that the system of governance, the organizational structure (or lack of it), and the tensions among the participants in larger postsecondary institutions ensure that the setting of goals was at that time, and would be for the future, a complex and frustrating process. Despite these rather ominous challenges, however, goal-setting continues to be a popular activity in the postsecondary environment. In this section the discussion focusses on the value of goal specificity in postsecondary settings.

Specificity of Organizational Goals

A number of writers have discussed the issue of goal specificity. Winstead and Hobson (1971) asserted that

institutional goal statements need to be clear and concise if they are to be of any value to the organization. These authors maintained that only after institution leaders decide what they should do, what they want to do, what they can do, and how they will go about doing it, will the institution be able to maintain autonomy and integrity and move consistently towards chosen goals. Winstead and Hobson (1971) stressed the importance of achieving some level of support for the goals from all the institution's constituencies in order that the goals might be achieved. Achieving goal consensus is important, however, it is only the first step. Winstead and Hobson (1971) went on to elaborate the need for the development of specifically defined objectives to be derived from the goals, which in turn, could guide the allocation of human and fiscal resources within the institution.

In a similar vein, Pratt and Reichard (1983), Lee and Van Horn (1983), and Capoor (1984) all acknowledged the importance of setting clearly specified goal statements as guides to institutional actions and decision-making. Pratt and Reichard (1983) provided an extra caution against attempting to please everyone, especially in cases where consensus is not achieved in the goal identification process. They suggested that if goals are to provide a focus for institutional plans, then the numbers must be limited, otherwise, attention and resources may be spread

so thin that none of the goals will be achieved.

Conrad (1974) offered a different perspective on the role of goals in higher education. Universities, he noted, seldom have formal or stated goals. As large and complex organizations, universities tended to have multiple, and sometimes conflicting, goals. Conrad (1974) suggested that the concept of "operative goals" might prove to be more useful in analyzing the university setting. His definition of operative goals was similar, but not identical to that used by Perrow (1971). Conrad's definition was much broader and included both stated and real goals. Perhaps the most significant difference between Conrad and Perrow was that Conrad placed particular emphasis on the role of constraints as influences on the decision-making process. Like Simon (1974), Conrad maintained that constraints need to be identified in a number of ways in order to determine the real goals of the organization.

Fenske (1980) was also less enthusiastic about the use of highly specific stated goals in institutions of higher education. He conceded that measurable objectives and goals may be more useful in some contexts than in others. Educational goals, however, were qualitative by nature, and do not lend themselves easily to measurable outcomes. Hambrick (1976, p. 48) stated this position even more strongly when he wrote: "the nature of university goals

make them quite unmeasurable. To attempt to measure the goals, is to probably mismeasure them." Fenske was not against the use of goal-setting per se, rather, he was concerned with the misuse of highly specific goal-setting techniques that have met with some success and popularity in other organizational environments. He (1980, p. 184) provided the following comments on the matter:

> I do not mean to imply . . . that setting institutional goals is necessarily a useless or hopeless enterprise. . . . [To suggest strategies] to do so, [however], requires abandonment of the idea that models of goal-setting that work with other complex organizations, apply to higher education institutions in a directly useful way. All such models assume a clear line of authority and a consensual set of goals, but neither exists in American institutions of higher education.

Research on Missions and Goals in Postsecondary Education

Gross (1971) reported on a major study that he and Grambsch undertook in the mid-1960s on perceived and preferred goals at 68 universities. They sent questionnaires to a sample of administrators and faculty. The questionnaires contained a list of 47 goals, including four categories of output goals, and four categories of support goals. Each respondent was asked to state the relative degree to which each goal was important at his or her institution. Perceived goal rankings were derived from the responses. Respondents were also asked to indicate the degree they thought the goals to be important. Preferred

goal rankings were derived from these responses.

Almost a decade later, Gross and Grambsch (1974) conducted an additional study focussing on the 1964 to 1971 period. The results of the survey in both years tended to relate primarily to faculty interests and career betterment. Student needs and concerns ranked much further down on the list of priorities. Faculty ratings tended to be very similar to those made by the administrative sample. One observation Gross and Grambsch drew from their 1971 data was that the cleavage between outside power holders and insiders had begun to affect significantly the goals of the university. In situations where external power groups (regents, legislators, parents, etc.) held the balance of power, one was more likely to find more emphasis on practical and service goals. Where insiders (deans, chairmen, faculty, etc.) held the power, one was more likely to find an emphasis on goals associated with the classical ideas of liberal education.

Beginning in 1969, an Educational Testing Services (ETS) research group headed by R. E. Peterson began to develop the "Institutional Goals Inventory" (IGI). The conceptual framework for this instrument was derived from the one employed in the Gross and Grambsch studies (Peterson, 1978). The IGI gauges the perceived importance of goal statements according to the present (is) and preferred (should be) importance. The goal statements are

of two types, outcome and process, directly comparable to the output and support categories used by Gross and Grambsch. Ninety goal statements are organized into twenty goal areas, thirteen of which relate to outcomes and seven of which relate to processes.

Since its publication in 1972, the IGI has been used on hundreds of college and university campuses throughout the United States and Canada (Peterson, 1978, p. 41). It has been translated into several different languages, including French and Spanish. Peterson (1973) conducted a comprehensive survey of the goals of 116 higher educational institutions in California. The results of this survey were used by a Joint Committee of the State Legislature to develop a master plan for the California higher education system. In the fall of 1979, ETS released two new forms of the IGS for specialized application to community colleges (the CCGI) and small liberal arts colleges (the SCGI).

Both the Gross and Grambsch and the Peterson research projects have spawned a number of subsequent empirical studies. A recent study by Neumann and Neumann (1983) which examined goal congruence in the university also used the research design developed in the Gross and Grambsch study. Goal congruence was defined by the authors as the degree of compatibility between the importance that an individual perceives the organization places on a goal, and the importance that the individual thinks the organization

ought to place on the same goal. All the groups surveyed, including various faculty and student categories, scored higher for goal congruence on support goals than on output goals. This offers some empirical support for the positions taken by Fenske (1980) and Hambrick (1976) outlined in an earlier part of this section.

The number of research studies conducted using the IGI is much too large to summarize in this chapter. Mention will be made of a small sample to illustrate some of the different approaches that have been taken. In 1977, Uhl conducted a goals study at North Carolina Central University. The study was intended to improve communication among university constituencies and to produce a set of goals that could be used in planning and evaluative studies (Uhl, 1978). Uhl used a Delphi technique in conjunction with the IGI in order to work toward goal consensus across all constituents. The study proved to be so successful that the goals derived during the process have been used to guide subsequent planning and budget decisions.

Two student-related studies illustrate quite different uses of a goals study format. Steiner and Milander (1980) reported on a community college in Washington State that decided to develop its own goal statements modelled after the format outlined in the IGI. Implications for the student service operations at the college were drawn from the results. Vinson's (1982) study reported on empirical

research done using the Community College Goals Inventory, a version of the IGI. A control group of approximately 100 students who had enrolled in a traditional college programme was compared with an experimental group of approximately 100 College Without Walls students. The two groups gave very similar responses with the exception that the students in the experimental group expressed greater satisfaction with the accomplishment of numerous institutional goals.

Konrad and McNeal (1984) reported on an application of the IGI in the context of Canadian universities. They surveyed university presidents and board chairmen. The study compared the perceptions of the respondents by position, region, and age and size of the institution. Although some differences attributed to region and size were observed, perceptions of university goals were remarkably uniform across the country. The profile provided by a study of this type is useful in coming to understand the character of Canadian universities.

One goal study of an entirely different nature was that undertaken by Duncan Campbell (1977) on the goals of the president of the University of Alberta. Campbell did a document analysis of the written correspondence and speeches of the president, Dr. Walter H. Johns, for the period from the early 1960s to the early 1970s. Focussing on the president as the primary interpreter of the university's mission and goals, Campbell provided a detailed analysis of

the direction(s) the university was heading during a period of tumultuous growth and rapid expansion. Campbell (1977, p. 13) chose the president for his analysis because he reasoned that ". . . the clarification of institutional goals is the central element of the president's mission. Without clear goals, his institution is vulnerable." At the same time, however, Campbell (1977, p. 13) was careful to point out that the president's real power was more illusory than absolute:

> For the survival both of his institution and of himself, the president must balance the values of the past and the prospects of the future with the realities of the present. His role thus oscillates, depending on the circumstances, between mediator and authority, but, in the main, tending toward the former.

Campbell's analysis underscores the importance of examining the behaviours and actions of an institution's key leaders as an effective method of coming to understand that institution's mission and goals.

Research on college and university missions has not been as prolific as it has on goals and objectives. Nevertheless, some very informative studies have been conducted. The following paragraphs highlight a selected number of studies to illustrate the work that has been accomplished. Richard C. Richardson and associates (1982) conducted an innovative study of the Arizona community college system. These researchers identified all services provided by community colleges in Arizona and combined them

into six function-based mission statements and six clientele-based mission statements. The twelve items were then submitted to seven groups which were asked to respond to two questions on a five point scale from "1" (strong opposition) to "5" (strong support). The two questions were: 1) How important is the mission statement? and 2) Should it be supported by tax monies? The seven groups included students, faculty, administrators, state and college board members, tax payers, and legislators. The results of the study were primarily useful in examining just how the several "publics" viewed the importance of each of the twelve mission statements and which ones these same groups were prepared to support with tax dollars.

Steve Sheldon (1982) conducted a longitudinal study in the California community college system. Sheldon selected some 6500 first-time students in eleven community colleges and followed their progress for four years from 1978 to 1982. The data collected in the study provided Sheldon with the means of prototyping several different student profiles within three commonly declared mission categories: transfer, occupational, and special interest. Within these categories Sheldon identified eighteen distinct prototypes; seven in transfer, five in occupational, and six in special interest.

This research quite clearly demonstrated that the student body was nowhere near as homogeneous in purpose as

it is sometimes made out to be. The open door policy had allowed students to determine, in large part, the purposes the institutions serve. Only by better understanding this diversity can institutional missions be adjusted to meet the mandate created by changing economic conditions and changing clientele.

Another empirical study related to missions in the postsecondary context was reported by Barbara Parker. Parker (1986) examined the causal paths between agreement on mission and severity of decline as they predict two types of response to decline in a sample of 56 small to medium-sized institutions of higher education. The results demonstrated that organizations with high levels of agreement on mission select fewer operating and strategic responses to decline. The severity of the decline in resources, on the other hand, proved to be a rather poor predictor of organizational response pattern.

Parker's study provided a rather dramatic illustration of the role an organization's mission plays in the strategic operation of the organization. Organizations with a high internal agreement on mission tend to be much more selective as they pursue various responses to a decline in resources. That is to say, postsecondary institutions with a clear sense of mission that is widely shared throughout the institution, are more likely to use that mission as a guide to the selection of strategies that

will best get them through the period of declining resources without undermining the purposes of the institution. This insight was made even more forceful in that Parker was able to demonstrate that the same relationship between mission and organizational response was true for several different levels of severity of decline.

These are but a few of the many research studies on missions and goals that have been conducted. Despite all this interest, however, some analysts remain skeptical about the efficacy of the current approaches to mission and goal research in postsecondary education. Breuder and King (1976-77) asserted that the problem of determining meaningful educational goals to guide organizational action is still very much an unsolved problem. Doucette, Richardson and Fenske (1985) suggested a new approach that might have some promise. This alternative conceptual framework calls for an examination of activity statements that are derived from an institution's actual operations in place of examining abstract mission or goal statements (Doucette, et al., 1985). The activity statements are stated in such a way that they combine the intent of the goals with the ability to measure the objectives. The assumptions underlying this approach are based on the belief that the current activities of an institution are direct and tangible expressions of the institution's real

goals. As such, they are directly useful in the complex and challenging management tasks facing today's administrators.

A Conceptual Framework

Like the approach outlined by Doucette et al. (1985), the conceptual framework selected for this research focussed on the actual programme operations rather than on abstract mission or goals statements. Using the formal mission and goals statement produced by the Ministry of Advanced Education and Job Training in 1986 as a backdrop to the investigation, the major objective was to examine the real-transitive goals of the community college system. The specific focus was on the identification of issues arising in the various programme categories commonly found in the colleges. Priority issues that influence the actions of college leaders were taken to be a direct reflection of the real goals of the college system.

Elements of the Framework

The elements of the conceptual framework are presented diagrammatically in Figure 2.2. The arrows linking the elements in the framework are intended to represent the primary relationships between the elements as well as the chronological order of the research project. The dashed arrow lines imply an indirect relationship between the elements whereas the solid lines imply a more direct

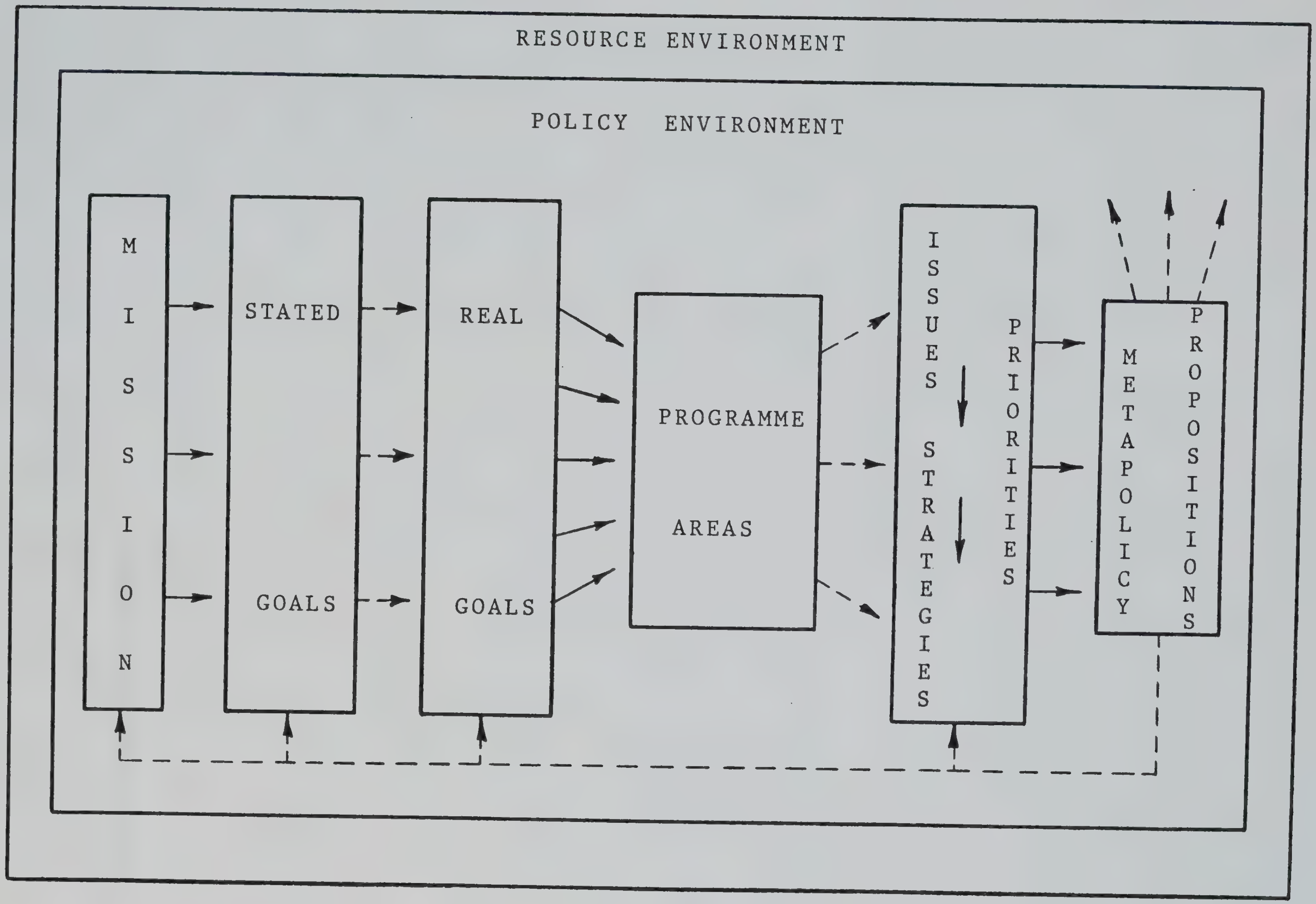


Figure 2.2 A Conceptual Framework for a Policy Delphi

linkage. The framework assumes that all the elements take place within, and are directly influenced by, the larger policy context or environment of postsecondary education in the province. Furthermore, it was recognized that the policy environment is in turn influenced by the even more general resource environment. These two environments are discussed in greater detail in the paragraphs on institutional isomorphism and resource dependency in the section on theoretical perspectives below.

Mission. Dressel (1987) made the claim that mission statements ought to act as a guide for the operation of a college and those who work in it. In much the same manner, the mission statement for a college system ought to provide guidance for the operation of the individual colleges within that system. As was mentioned in the preamble above, the mission statement referred to in this research was the revised statement released by the Ministry of Advanced Education and Job Training in 1986.

Stated goals. According to Etzioni (1964), stated goals are the official intentions of an organization. They are what the organization claims to be aiming at or attempting to accomplish. The mission statement from the Ministry of Advanced Education and Job Training was accompanied by a series of stated goals to guide the college system. The Ministry's stated goals tended to be

quite general in nature. This is not unexpected given that these goals provide a framework for the entire provincial system.

Real goals. The real goals of an organization are a reflection of what the organization is actually attempting to achieve. Real goals may or may not be synonomous with the stated goals of an organization. They can be subdivided into two major categories: reflexive and transitive. Reflexive goals are concerned with the ongoing maintenance of the organization whereas transitive goals are directed more toward the impact of the organization on its environment. The primary interest in this study was directed at the real transitive goals of the British Columbian college system.

Programme areas. In the paragraphs above mention was made of the intent of this research to focus on the actual programme operations of the colleges rather than on abstract mission and goals statements. For the purposes of this investigation programmes were taken as tangible evidence of the real transitive goals of the colleges. All of the major programme areas found in the British Columbian college system were used as part of the semi-structured, open-ended interviews employed in the first round of the study.

Issue identification. Hogwood and Gunn (1984, p. 7) suggested that issue identification involves "the anticipation of problems or opportunities which suggest the need to consider action." These authors pointed out that some problems and opportunities were unforeseeable, but that others might be identified at an earlier stage through improved methods of scanning the environment for advance indicators. This research focussed on an issue search using a panel of senior Ministry and college-based experts. The anticipated outcome of the study was that the attention of policy makers would be directed toward potential problem and opportunity areas at an early stage.

Priority issues. Following the issue identification process, the next step was to decide which issues were worthy of further investigation and consideration. Hogwood and Gunn (1984) referred to this process as "issue filtration " and suggested a variety of techniques for accomplishing this process. In this investigation the issues identified by individual panel members were subjected to a rating and confirmation process over two rounds of questionnaires to determine the priority issues.

Strategy formulation. Lozier and Chittipeddi (1986, p. 4) defined issue management as:

> . . . an ongoing organizational process concerned with the identification of issues that may impact on the strategic directions of

> the organization, the analysis of these issues to establish their relevance to the organization and the likelihood of their occurrence, and the development of appropriate organizational responses to these issues.

These authors regarded strategy formulation as an essential element in the issue management process. In this inquiry, once the issues had been identified and priorities determined, the focus of the study shifted to formulating potential coping strategies for dealing with the issues.

Policy implications. Ultimately, the aim of this research framework was to identify policy implications. The objective was not so much to develop actual policy alternatives; rather, it was to outline a number of policy guideposts or metapolicy propositions against which policy alternatives might be measured and compared.

Theoretical Perspectives

The data accumulated during the course of this inquiry facilitated the testing of two theoretical perspectives on organizational functioning: resource dependency and institutional isomorphism. These two theories offer more complete explanations of the relationship between the resource and policy environments referred to above and the remaining elements identified in the framework.

Resource Dependency

The theory of resource dependency maintains that an

organization's operation and political decision-making are in large part, influenced by the institution's dependency on the resources provided by the environment (Pfeffer and Salancik, 1978). The theory assumes that the greater the need for a resource and the larger the amount of the resource provided the greater will be the dependency relationship (Weeres, 1984). Resources, in this context, are measured as income flows to the institutional budgets, whereas needs are measured by the amount of slack in those budgets and the availability of alternate sources of income. The magnitude of a given resource is simply the percentage it represents of the total income available to the institution.

The theory predicts that the greater the dependency, the greater will be the compliance of the organization with the preferences of the provider of the resource (Worth, 1986). Similarly, the theory draws attention to the prospect of a continuing tension between external expectations or pressures on an organization and the preferences of individuals and groups inside the institution. Worth (1986, p. 4) asserted that under this theoretical interpretation the "power and actions of individuals are predictable on the basis of the need for, access to, and/or control over resources." Evidence in support of the resource dependency theory of college functioning was extracted from the findings in this study

and is reported in the final chapter.

Institutional Isomorphism

Institutional isomorphism is concerned with why institutions are similar rather than how they are different. The primary focus is on the homogenization processes that make institutions which are operating in the same environment similar in structure, function, and policy as they strive for legitimacy, status, power, and resources (Worth, 1986). Weeres (1984) identified three mechanisms of institutional isomorphism: **coercive** - resulting from common legal, cultural, and hierarchically structured envrionments; **mimetic** - resulting from modeling after higher status institutions in same field; and **normative** - resulting from professionalization which brings into organizations personnel who share common professional norms and perceptions.

The theory would predict that over time college policies would tend to become more and more similar, particularly in those areas in which colleges share common legal or cultural constraints, where the effects of their decisions are more uncertain, and where professional norms are strongest (Adler, 1987). Evidence in support of the institutional isomorphism theoretical interpretation was identified from the data gathered in this inquiry and is reported in the final chapter.

Summary

This chapter has provided a review of the literature related to this study and has outlined a conceptual framework to guide the research. Two different visions for the future of community colleges were identified. One view would encourage the continued expansion of community college activities into new frontiers of the teaching-learning environment, whereas the alternate view would advocate building on the traditional strengths of collegiate education. The need to determine clear priorities to ensure the continued survival of the community college was highlighted. The concept of organizational goals was defined and the functions of goals within the organizational environment were examined. The processes of goal setting and change were also reviewed.

In the middle sections of the chapter attention was devoted to organizational goals in the postsecondary environment. The issue of goal specificity was examined. An extensive review of research on mission and goals in postsecondary settings identified strategies that might be incorporated into the present research effort. Several useful ideas were derived from the review. One study in particular provided an interesting model for conducting research on college missions. The Doucette et al. (1985) study examined the current activities of Arizona colleges as tangible expressions of the real goals of those

organizations. The study reported in this document has adopted a similar approach.

The last sections of this chapter outlined a conceptual framework to guide the research conducted in this study. The elements of the framework were identified as were the relationships between those elements. The bases of two competing theoretical interpretations of college politics were identified and discussed. Before the details of methodology, research design and procedures are discussed, the next chapter provides an outline of the context in which colleges have developed in British Columbia.

CHAPTER III

THE BRITISH COLUMBIA CONTEXT

In the first chapter, mention was made of the comparatively short period of time (approximately twenty-two years) that publicly supported colleges have been in existence in the Province of British Columbia. Nevertheless, a great deal has happened during these twenty-two years to influence the programmes that are found in the contemporary community colleges. The purpose of this chapter is to provide a brief overview of the more significant forces that have helped to shape the contemporary college system in British Columbia. The chapter is divided into two major sections. The first section outlines the origins and early developments of the college movement in British Columbia, the second section highlights a number of events and initiatives that have had a significant influence on colleges and their programming. The primary focus in the second section has centred on the role of the provincial government, although other major initiatives are identified as well.

Origins and Early Developments

Prior to the late 1950s the demand for postsecondary education in British Columbia had grown fairly gradually. There did not seem to be any particular interest, either on the part of the university or society at large, to

establish additional educational institutions (Dennison, 1979b). By 1960, however, the public mood was beginning to shift. In addition certain demographic and economic facts were emerging that lead the experts to project a dramatic increase in the demand for postsecondary education within a decade. It became clear to even the most conservative of politicians and university administrators that something would have to be done to accommodate the expected increase in students (Dennison, 1979b).

Actually as early as 1958 the government had amended the Public Schools Act to allow school boards to plan colleges under affiliation with the university (Soles, 1968). Despite this provision for the establishment of colleges, relatively little direct activity occurred during the next few years (Workman, 1975). The reasons for the inactivity are not entirely clear, and it remained for John B. MacDonald, the newly appointed president of the University of British Columbia, to arrive on the scene in 1962 before anything of substance was to occur.

The MacDonald Report (1962)

Upon his assumption of the Presidency, one of MacDonald's first tasks was to initiate a study of higher education in the Province (Workman, 1975). MacDonald and a small group of colleagues from the university toured the province to hear first hand the aspirations of the people.

Their objective was to assess "the long-term requirements for higher education throughout the province (MacDonald, 1962, p. 1)." The fact that most people in the province had limited accessibility to postsecondary educational opportunities soon became apparent to MacDonald's committee. The limitations were geographic, socio-economic, cultural, and academic in nature.

MacDonald's report highlighted the problems of accessibility and the clear desire on the part of local authorities, particularly school boards, for involvement in and responsibility for whatever alternative educational institutions were to be established. The demand for trained manpower in a resource-based economy was also noted and reference was made to the need to provide higher education for all those who might benefit from such an experience.

When the report was finally tabled it recommended the establishment of three four-year colleges and a number of local multipurpose comprehensive colleges modelled on the California brand of community colleges (MacDonald, 1962). These multipurpose or comprehensive colleges were to offer a diverse range of curriculum options including; job training, compensatory and remedial education, general education, and two years of university transferable studies. Each of the institutions recommended in the report, four-year and two-year colleges alike, were to be

autonomous in function and governance from the University of British Columbia. The two-year colleges were to develop under the auspices of the local school districts who would be responsible, at least in part, for the financial support of the institutions.

The Link with Community

Public reaction to the report was very enthusiastic. Since the report coincided with the prevailing government view of partial local responsibility for the financial burden, the necessary legislation was rushed through in a matter of months (Dennison, 1979b). The onus to initiate the development of a college was clearly on the local school district authorities. Only after a plebiscite to approve the idea of a college, and a referendum to agree to support it financially, would the government act to establish a college.

Under the proposed scheme communities (school districts) were to bear fifty percent of the capital costs for the provision of college facilities in addition to the local share (40%) of the ongoing operating costs. Although a number of plebiscites to establish colleges were approved throughout the province only one college region, West Kootenay, was to pass the referendum necessary to establish college facilities. Nevertheless, school boards in a number of regions sought out pragmatic alternatives

(Beinder, 1986). Colleges began to open from the mid-sixties on in community-based facilities like church basements and unused school building space in the evenings. By 1971 nine colleges were in existence. All had their origins in the public process involving agreement between groups of school boards backed by favourable responses to public plebiscites (Beinder, 1983a).

Clearly, the early impetus for college development was much dependent on community-based interest and support. Colleges were perceived as being responsive to community needs and aspirations. The President of the British Columbia school trustees, at the time also a member of the Capilano College Council, Peter Powell, summed up the feelings of many people associated with the college movement in this early period when he commented:

> The college, to fulfill its function, must be able to hold the interest and support of the population which it serves, and this can be done only it (sic) its programmes relate to the specific needs of the community and satisfy the grass root demands of the people in the college attendance area (as quoted in Beinder, 1983a, p. 10).

The Decision to Meld

In 1971 government policy was amended to combine the provincially operated vocational schools and the adjacent community or regional colleges (Dennison, 1979a). The government's rationale for the move confirmed a commitment to the broadly-based principles of comprehensiveness,

access and flexibility.

At the time the move met with some resistance internally. Vocational instructors feared that vocational training would not receive sufficient emphasis within the context of a larger comprehensive college. Many academic instructors, on the other hand, seemed to feel it was an affront to be classed in the same bracket as vocational instructors. Despite the differences, and notwithstanding the varying degrees of success in the melding process throughout the province, in the main the move resulted in a strong reaffirmation of the basis for a comprehensive curriculum in the colleges affected. The exposure of students from widely different programmes, one with the other, has made an important contribution to the general democratization of education in the province (Beinder, 1983a).

A Period of Expansion

Following the change of government in 1972, a Task Force on the Community College was established by the Minister of Education in late 1973. Again, as was the case with the MacDonald study group, the emphasis was on the public process. Hearings were arranged throughout the province and submissions were invited and received from several groups and individuals. Determined to ensure that the needs, hopes and aspirations of British Columbians living far from the major metropolitan centres were heard,

the Task Force held many of their hearings in the remoter regions of the province (Beinder, 1983a).

During the course of the hearings it became clear to committee members, that there was a growing public expectation for educational opportunities that were accessible and affordable. This was particularly the case for those for whom access to postsecondary education had not been a realistic option in the past. The Task Force felt that community colleges should attempt to decentralize educational resources to ensure that learning opportunities were shared equally by all residents of the province. In their final report the Task Force (British Columbia, 1974, p. 11) concluded:

> A high priority in future college development should be a concern for meeting the educational needs of those who are geographically, socio-economically or physically disadvantaged.

The government of the day saw colleges primarily as educational resources to serve the wider community, particularly the disadvantaged and under-educated (Dennison and Gallagher, 1986). Shortly after the Task Force report was released, the government moved quickly to establish four additional colleges in the remoter regions of the province, bringing the total number of colleges to fourteen. A fifteenth college was added five years later with the partitioning of one of larger metropolitan colleges into two separate institutions. Unlike the other

colleges in the province, these new colleges were established without the requirement of local plebiscites or referenda. School districts merely had to pass by-laws requesting the right to establish a college.

Besides increasing access to postsecondary education throughout the province, the government also recognized the need to accelerate the construction of college facilities. Dennison and Gallagher (1986) observed that these priorities required more direct government intervention on both a financial and policy level than had previously been the case. They (Dennison and Gallagher, 1986, p. 92) asserted that the Task Force report:

> . . . laid the ground work for a more systematic, ministry-directed group of institutions in the province. . . . the government's stake in the direction that colleges should take was made very evident.

The transition to system had begun.

The Emergence of System

In this section a selection of significant events and actions are highlighted. These events and actions have helped to shape the contemporary college system in British columbia.

The Colleges and Institutes Act (1977)

By 1975 the government had changed again, but the trend toward increased government involvement in college affairs continued unabated. In 1977, the Colleges and

Institutes Act (Bill 82) was tabled in the legislature (British Columbia, 1977). The new Act brought with it several structural changes for the colleges. One of the more noteworthy was the clear distinction made between colleges on the one hand, and institutes on the other. The colleges were expected to retain a local or regional orientation, whereas, the institutes were expected to serve the entire province in more narrowly defined programme areas (Dennison and Gallagher, 1986). This overlapping between colleges with their comprehensive programme mandate and regional focus and the institutes with their narrower programme mandate and provincial focus became a source of confusion in the minds of many people.

The impact of Bill 82, however, extended far beyond the problem of institutional mandate. The post-Bill period was characterized by a host of new procedures affecting programme and course approval, budgetary control, and governance, all of which influenced the day to day operations of the colleges (Dennison, 1980).

Under the legislation, colleges acquired corporate status and one hundred percent of their funding was to come directly from government resources. For the colleges this change effectively removed the legal and financial ties with the local community and region. Another section of the Act indicated that only the Minister was empowered to establish policy respecting postsecondary education and

training. Clearly the power of the local college boards was significantly reduced.

The Act also provided for the creation of three intermediary councils between the Minister and the colleges to coordinate programme development and the distribution of funds (British Columbia, 1977, Part 6, sections 44 - 49). As outlined in the legislation, the Minister was to designate the roles and responsibilities of each council.

Although each council was established as a separate entity, and in theory at least, was not required to consult with the others, in practice the three jurisdictions were interdependent. Dennison (1980, p. 8) commented about the problem:

> While one Council is concerned with the approval of a given program, with the implied allocation of funds, another Council has responsibility for the capital development to allow the same program to operate.

The net impact of this complex system of programme and funding approval was to further reduce the autonomy of the college boards.

Institutional Evaluation

In 1976 the British Columbia Council of College and Institute Principals adopted the first formal institutional evaluation process. A year later, with the passage of the Colleges and Institutes Act mentioned above, institutional

evaluation received official status. Section 66 of the Act (British Columbia, 1977) stated:

> A corporation shall by March 31, 1982, and by the end of each subsequent five year period, report to the Minister setting out the reasons, if any, why the corporation should continue to exist and, on receipt of this report, the Minister shall advise the Lieutenant Governor in Council about the measures that should be taken to remedy or improve the situation disclosed in the report.

In 1981 the Ministry of Education confirmed that the guidelines governing the institutional evaluation process as set out by the Council of Principals were accepted as satisfying the requirements of the legislation.

In its original form institutional evaluation as practiced in British Columbia colleges (Council of Principals, 1979, p.2) had three purposes:

1. To encourage excellence in community college education through the development of criteria and guidelines for assessing educational effectiveness.

2. To encourage periodic institutional self study and evaluation as a basis for institutional improvement and renewal.

3. To reliably demonstrate the quality of community college programs to concerned publics, such as: universities receiving transfer students; employers hiring vocational, technical, and career students; government agencies providing funding; governing boards and councils; prospective students; and the general public.

The requirements of the Act created an additional purpose to this list.

The institutional evaluation process in its original form included three distinct phases: an internal self-

study, an audit by an external team, and a follow-up by responsible parties on the findings and recommendations. During the internal self-study phase it was expected that the entire institutional operation, including mission and goals, programmes, faculty and support staff, administration, governance, and facilities would be divided into a series of functional units for detailed analysis.

After the first round of evaluations had been completed a decision was made to review the procedures (Council of Principals, 1984). During the review the principals reconfirmed their commitment to the process but at the same time pointed out some of the limitations of the model then in use. Perhaps the most significant problem was that the internal self studies attempted to accomplish too much within the confines of a limited time frame and limited resources.

What was needed was a process which encouraged, on the one hand, a collective look at the overall functioning of the institution, while on the other, allowed for intensive reviews of programmes and support functions at a level of detail needed to provide useful analysis. The feeling was also quite strongly held that programme review should be an ongoing process, not left to a major institutional effort for all programmes at the same time. As a result of the review process new policies and procedures were established (Council of Principals, 1984). The new procedures

encourage more depth in the programme and support function reviews while at the same time allowing the institutional self-study to focus on the larger issues that have institution wide implications.

Shifts in Programme Emphasis

Prior to the introduction of the 1977 Colleges Act, an indepth study of British Columbia colleges (Dennison, Tunner, Jones and Forrester, 1975, p. 152) found that:

> Of all the provincial systems of community colleges, British Columbia has developed a model which is the most community-oriented, . . . [a model which also places a major] emphasis on the development and presentation of a comprehensive curriculum.

With the tabling of the Act, however, there was a definite shift away from community orientation toward greater centralized control. Along with the subsequent decline in local autonomy, many felt there was less commitment to the principle of broadly-based comprehensive curricula for the colleges (Beinder, 1983a).

Certainly the then Minister responsible for colleges, Dr. Pat McGeer, did little to dispel any doubts individuals may have had about the government's continuing commitment to comprehensive educational programming. McGeer was unequivocal when it came to what he saw to be the preferred role and challenge for the college systems. In a speech to American community college trustees he stated:

> The field of supplying marketable skills for the vast majority of our young people is wide open. It is there for the community colleges to accept and the public is begging for it to be done. There is a full range of vocational and technical skills, there is a seemingly inexhaustible realm of service industries and there is what may be the most important of all, the teaching of entrepreneurial skills (quoted in Beinder, 1983a, p. 16).

Elsewhere in that same speech, McGeer made it clear that colleges, in his view at least, had very minor roles to play in the provision of general academic education.

Thus it became the prevailing government view that colleges should regard their central purpose as the production of a skilled labour force (Dennison, 1979b). To accomplish this aim colleges were to place a primary emphasis on the vocational and technical programme areas. Government priorities were such that other sectors of the traditionally comprehensive curriculum were overshadowed. For a time at least, many of these other programme areas were perceived by some observers in the college system to be under pressure to be replaced by technical and vocational skill training.

Coincident with this growing emphasis on marketable skill training, the government, in a move to control increased spending in the postsecondary sector, began to talk in terms of system comprehensiveness and programme rationalization (Beinder, 1983b). The notion of the comprehensive college began to be replaced with system

comprehensiveness in the lexicon of the bureaucrats. The Ministry's proposed method of maximizing comprehensiveness was to divide the province into a series of geographic regions, including two or more college regions, and then to ensure that each region had available a range of programme options (Beinder, 1986). The range of options in any given region would have to be rationalized with surrounding college regions. Rationalization in this context referred to a process which kept to an absolute minimum the occurrence of programme duplication in reasonably proximate neighbouring institutions.

Further pressure was placed on colleges to modify or abandon their comprehensive curricula with the onset of economic recession in the early 1980s. The Government imposed severe limitations on funding, limitations which inevitably meant that college administrators and boards had to face hard decisions on spending priorities and programme reduction. Given the continuing government priority on marketable skills, the pressure was felt in certain sectors of college programming more than in others. Continuing education and general academic programmes felt more than a little threatened.

Integrated Five-Year Planning

The specification that each college in British Columbia submit an educational plan was first required by

Ministry policy in 1979. The Ministry issued planning guidelines that were intended to assist colleges in preparing plans which would primarily be useful as management tools for internal use. It was anticipated that the plans would have a threefold purpose: to improve community contact; to provide direction for internal operational decisions; and to provide a means of evaluating whether or not appropriate changes were occurring and that goals were being achieved (British Columbia, 1979). As suggested in the planning guidelines, the Ministry was to be a secondary audience for the documents. Nevertheless, the Ministry was seeking assurance that the specific goals of the individual institutions were compatible with the overall goals of the total system. The concept of system coordination was implicit, if not overtly explicit, in these guidelines.

Within three years (1982) the Ministry reissued planning guidelines that would change the nature of the planning process quite substantially (British Columbia, 1982). In part, this second set of more specific planning guidelines appeared to be motivated, on the one hand, by perceived weaknesses and shortcomings contained in the planning documents produced under the 1979 guidelines, and on the other, by the changing position of the government vis-a-vis public spending and restraint.

Several of the initial planning documents developed in

response to the 1979 guidelines were found to be lacking in one way or another from the Ministry's point of view (British Columbia, 1983a). Plans tended to be lengthy and descriptive, lacked a clearly delineated planning framework, and very often provided no specific action strategies to indicate how the plan would be implemented. In addition, during the interim period between 1979 and 1982, the government was returned on a platform promise to curtail government spending. Soon after the election a restraint programme was announced and all sectors of public spending were affected. The centralized control of the colleges was increased dramatically with the issuing of the new planning guidelines. (Further details on the impact of the restraint programme are discussed in the section on Formula Funding and Resource Allocation below.)

The 1982 planning guidelines identified eight goal areas as bases for the planning process (governance; comprehensiveness; quality; relevance and cost effectiveness; manpower development; lifelong education; accessibility; social development; and accountability) supplemented by thirty other specific objectives. Although this planning document reconfirmed a commitment to many of the qualities which had characterized the institutions to that time, it also was explicit in outlining the Ministry's interests and priorities (Dennison and Gallagher, 1986). Several very restrictive assumptions were contained in the

guidelines such as the continuance of financial restraint, avoidance of programme duplication, and high levels of accountability. These and other assumptions were to be reflected in the five-year plans developed by the individual institutions. In the spring of the following year, 1983, the Ministry formally confirmed the first mission and goals statement (British Columbia, 1983b) which expressed in very succinct terms the government's plans for the future of the system:

> The Mission of the College and Institute System of the Province of British Columbia is to provide educational opportunities to assist adults to meet continuing and changing individual, economic, and societal needs. These opportunities will be provided recognizing the aspirations of individuals, the present and future requirements of Provincial and Canadian society for economic development, priorities of government, and the structure of the educational system of the Province as defined through legislation.

Changing Patterns of Governance

One of the more contentious issues resulting from the 1977 Colleges and Institutes Act was the establishment of three provincial councils to function as interbodies between the Ministry and the colleges. The three councils included the occupational training council, the academic council and the management advisory council. The first two of these councils were appointed by the government and the latter was made up of all college board chairmen plus senior Ministry officials. Each council was assigned

specific programme responsibilities. A council's role was to allocate provincial funds to colleges in support of the programmes under that council's jurisdiction.

These councils were perceived by some observers at the time to have usurped many of the fundamental rights of college boards (Beinder, 1986). The councils assumed major responsibilities in the areas of programme development and approval. Over time the focus of college boards was increasingly forced to turn away from their traditional community base and toward the provincial councils.

From the outset the problems created by this complex governance structure became obvious. Problems of coordination and communication between the councils and the colleges and among the councils themselves resulted in growing confusion and frustration in the field. Dennison (1980, p. 8) provided the following insight into the issue:

> Each [council] operates differently, has a different basis for its composition and has adopted a unique "modus operandi". There is a perception among many observers that, while the Councils are separate corporations and, in theory, not required to consult with one another, in practical terms they are interdependent. The last point creates an interesting contradiction in reality. While one Council is concerned with the approval of a given program, with the implied allocation of funds, another Council has responsibility for the capital development to allow the same program to operate. Obviously, it is essential that formal communication among the Councils exist. Such communication, at present, falls far short of perfection.

Furthermore, if the councils were intended to shield

institutions from direct political interference, the legislation prevented them from doing it (Beinder, 1986). Too many key decisions were still reserved for the direct approval of the Minister.

Opposition to the provincial council structure continued to mount during the early 1980s. By 1981 one of the councils itself was recommending a change. After extensive review and consultation the Management Advisory Council submitted a brief to the Minister outlining several options for change, but ostensibly recommending the formation of a single council (Management Advisory Council, 1981).

A second influence on the changing patterns of governance has been the structure and membership of college boards. Prior to the 1977 Act college boards (or councils as they were known then) were composed of a minority number of government appointees and a majority of locally-based school board appointments. With the passage of the Act, colleges were established as independent corporations, thereby dispensing with the complexities inherent in shared provincial and local funding (Beinder, 1983a). The Act itself created no change to the composition of the boards, nevertheless, in the years that followed several changes were to occur.

The Act stripped the college boards of many of their policy making functions. Policy making was to be the

prerogative of the Minister. Over time this severe limitation on boards, along with the limitations created by the existence of the three councils, began to significantly alter the role and functioning of boards. The composition of the boards began to shift to reflect the changing role. Steps were taken in subsequent amendments to the Colleges and Institute Act in 1979 and 1980 to increase the number of government appointees so that they would be in the majority over school district appointees. Finally, in 1983 the government eliminated school board representatives altogether, leaving only provincial government appointees on college boards. The three provincial councils were discontinued at the same time. The coordination of programmes and funding was to revert to the direct control of the Ministry of Education.

Resource Allocation

In the early part of this decade the government began a review of the scope and extent of public services in the province. Motivated by a philosophy that espoused restraint in public spending, the government actively examined ways that it might reduce its overhead in the service sector. By 1982 this search was accelerated, at least in part, by the onset of a recession in the provincial economy. The restraint programme became a factor influencing almost every sector of college operations.

Following a renewed mandate at the polls in May of 1983, the government of the day announced a legislative package that included plans for even more severe restraint in government spending. The postsecondary education system was to be one of the main recipients of the effects of this policy. For example, Dennison (1987) observed that by 1984/85 the operating grant for the college system had been reduced by 4.5 percent in the period since the policy was announced in 1983. Measured against the effects of inflation, the real decrease was even more dramatic.

As part of the integrated five-year strategic planning policy in 1982, the government announced that it intended to phase in a formula-based granting procedure in the college system starting in 1984. After a three-year phase-in period all colleges would receive the same resources per approved full-time student in a given programme. The formula contained a complex array of weightings and adjustments that were meant to reflect differential costs associated with different programmes and college operations. Each year the colleges would be expected to negotiate a profile of approved programme enrollments with the Ministry for the coming year. Once approved, the programme profile would establish the base against which the funding for the colleges would be determined. In theory this new granting procedure was to establish much

greater equity among colleges in terms of fiscal resource allocation.

Not all of the funding for the college system, however, was allocated using the formula. In 1985/86 the Ministry held aside a certain portion of the college grant to allocate in support of special initiatives that the government wanted to encourage. This non-formula funding was referred to as excellence funds. In 1986/87 the excellence funds were increased, and a wider array of programme initiatives including operating capital for the system was part of the allocation.

The excellence funds constituted only one source of non-formula funding available to the colleges. Faced with the prospect of severe decreases in resources resulting from the government's restraint programme, many colleges began to explore alternate sources of revenue other than government grants. One of the more significant sources of non-formula funds colleges pursued were those made available through the Canadian Jobs Strategy (CJS) initiative. Through the CJS programmes established in 1985, colleges were able to offer programmes and services under direct contract to the Federal government. Other strategies adopted by colleges included establishing college foundations to raise money to help students in times of rising tuition and declining student assistance; negotiating international education agreements to provide

services to students from several countries around the world; and packaging and selling training services to British Columbian business and industry (Beinder, 1986).

Concluding Remarks

Publicly supported colleges in British Columbia have experienced a remarkable period of growth and transition during their relatively short twenty-two year history. Originally conceived as community-based "grass roots" movements that were expressions of a desire to decentralize educational opportunities throughout the province, the colleges have emerged as an integrated system with a fair degree of centralized control and coordination. Dennison and Gallagher (1986, p. 93) commented:

> The period from 1977 to 1983 witnessed a consistent pattern of increasing provincial responsibility for the colleges. Both the spirit and the reality of community involvement which had characterized the early years of the colleges slowly faded; and provincial government priorities for the colleges took precedence over the local and regional interests.

This transition to centralized control had left some concerned about the future of the colleges. Observers like Dennison and Gallagher, however, have remained essentially optimistic. In their recent description of the British Columbia college system (1986, p. 95) they concluded:

> There are many college people in British Columbia who are willing to struggle for retention of local or regional control. That control is likely to produce, in the years ahead, a new relationship between the colleges and the provincial government

> which will see the colleges become a co-operative network of postsecondary institutions balancing the legitimate needs for some rationalization on a provincial basis and the equally legitimate need for regional and local responsiveness on the part of individual colleges.

The next chapter will outline the methodological framework, research design and research procedures that were employed in this study.

CHAPTER IV

METHODOLOGY, RESEARCH DESIGN AND RESEARCH PROCEDURES

In this chapter a description is provided of the research orientation, the methodological framework, the research design, and the research procedures employed in this study. The section on methodological framework includes a discussion of intuitive forecasting; the Delphi technique: uses, advantages and criticisms; the concept of a policy Delphi; selected applications of the Delphi technique in postsecondary education; and the use of the technique as it is employed in this research project. The section on research design includes a statement of the focus of the study, panel selection procedures, and the characteristics of panel members. The section on research procedures includes a description of the pilot study, and instrument development, data collection and data analysis procedures for each of the four rounds included in this study.

Research Orientation

This study can be fitted into an action frame of reference in that one of the major objectives of the study was to identify metapolicy propositions that might be used to guide policy development in institutions and at the system level. The primary analytic framework was based on the intuition or insight of experts rather than on an

inductive analysis from an extensive empirical data base or a deductive analysis from a well-established theoretical base.

Both qualitative and quantitative methods have been employed during the data analysis phase of the research. Descriptive statistics were used in the analysis sections although no predictive powers were assumed. This research orientation was deemed suitable in that it fits both the nature of the questions under investigation and the particular methodology employed in the study.

Methodological Framework

Forecasting is generally accepted as a means of analyzing alternative futures. As Steier (1985, p. 54) noted, forecasts of alternate futures provide the context for the development of new policy options. Given the futures orientation of this research, forecasting played an important, but not exclusive role. The methodology employed in this study is discussed and outlined in the paragraphs below.

Intuitive Forecasting

Several different techniques of forecasting can be found in the policy literature (See, for example, Paine and Naumes, 1975; Bright, 1978; Dunn, 1981). Dunn (1981, p. 141) identified three principal forms of policy forecasts:

1. Projection

2. Prediction
3. Conjecture

Projections are forecasts which are based on the extrapolation of current and historical trends into the future. Extrapolative forecasts make assumptions about the appropriateness of the particular quantitative techniques used in a forecast (for example, time series analysis or catastrophe methodology) or about the similarity between cases (for example, between past and future policies). Extrapolative forecasts normally require an extensive and stable data base on which to base a projection.

Predictions are forecasts based primarily on explicit theoretical assumptions. Dunn (1981, p. 141) explained:

> The essential feature of a prediction is that it specifies the generative powers ("causes") and consequences ("effects"), or the parallel processes or relations ("analogues"), believed to underlie a relationship.

Predictive forecasts normally require a well-established body of relevant theory on which they can be based.

The third form of forecast is conjecture. Conjectures rely on intuitive or subjective judgement rather than on empirical data or scientific theories. Subjective judgements are used in circumstances where empirical data and/or theory are unavailable or inadequate. In explaining the bases of conjectural forecasts Dunn (1981, p. 149) claimed:

> Subjective judgments are often based on retroductive logic, that is, the process of reasoning that begins with claims about the

> future and then works backward to the information and/or assumptions necessary to support claims. . . . Retroductive reasoning is often a creative way to explore ways that potential futures may grow out of the present . . .

Subjective judgements are also influenced, in large part, by how individuals perceive events and situations. In commenting on the important role perceptions play in educational settings Johnson (1987, p. 207) observed:

> Practitioners in educational settings deal with perceptions constantly. . . . Instructional practices, administrative decisions, and policy initiatives are guided by perceptions of individuals and educational needs . . . Knowledge of employees' and other stakeholders' perceptions helps administrators to revise educational policy and change individuals' experiences in educational organizations . . .

Individuals behave on the basis of what is perceived rather than what is (French, Kast, and Rosenzweig, 1985). Therefore perceptions are key to understanding and predicting behaviour. Shapiro and McPherson (1987) extended this line of reasoning to the policy field when they argued that it is how public policy makers perceive policy dilemmas that becomes an important factor in determining their policy behaviour.

Most researchers, on the other hand, have always been very wary of relying too heavily on perceptual data sources. Johnson (1987, p. 206) cautioned that "researchers . . . need to be conscious of the pitfalls inherent in relying on their own and others' perceptions." At the heart of the concern is the trustworthiness of the

data; whether or not perceptual data sources are an adequate semblance of objective reality. One can never be absolutely certain of the accuracy of perceptual data sources, nevertheless, there are certain techniques that can be used to enhance the trustworthiness of the perceptions acquired. It remains the responsibility of the researcher to employ these techniques along with methodological approaches appropriate to the inquiry.

According to Peck (1983, p. 3) classical planning approaches presuppose stable organizational environments and structures. Given the degree of uncertainty experienced by the British Columbia college system leading up to this planning period, the researcher decided to employ an intuitive forecasting methodological framework. The Delphi technique selected for use in this study is consistent with such a methodological framework.

The Delphi Technique

The Delphi technique consists of procedures which allow a researcher or a research team to elicit and refine the intuitive judgments of a selected group of respondents. Linstone and Turoff (1975, p. 3) defined the Delphi technique in general terms as:

> . . . a method for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem.

Dunn (1981, p. 196) offered a slightly different definition which emphasized the futures orientation of the technique:

> Delphi technique is an intuitive forecasting procedure for obtaining, exchanging, and developing informed opinion about future events.

In order to facilitate structured communication, Linstone and Turoff (1975, p. 3) suggested that the researcher ought to provide:

> . . . some feedback of individual contributions of information and knowledge; some assessment of the group judgement or view; some opportunity for individuals to revise views; and some degree of anonymity for the individual responses.

Originally designed for use by United States military strategists in the 1950s, the Delphi technique has gained considerable acceptance by a wide range of users in business, industry, government and education. By the mid-nineteen seventies, Bright (1978, p. 42) reported the ". . . Delphi technique rapidly swept throughout the world." Preble (1983, p. 76) also observed the same trend when he reported:

> Literally hundreds of Delphi studies have been done since those early days by universities, corporations, and government in the United States, Canada, Western Europe, Japan, and the Soviet Union.

The early applications of the technique, according to Dunn (1981, p. 196), tended to emphasize the use of experts to verify forecasts based on empirical data. Typically these experts were asked to make predictions about alternative futures and to estimate the probability and the time of

occurrence of each of these alternatives. Since that time, however, the technique has been modified and extended for use in a wide variety of research applications. Delbecq, Van de Ven, and Gustafson (1975, p. 11) suggested that the following diverse range of planning objectives can be achieved using a Delphi process:

1. To determine or develop a range of possible program alternatives
2. To explore or expose underlying assumptions or information leading to different judgements
3. To seek out information which may generate a consensus on the part of the respondent group
4. To correlate informed judgements on a topic spanning a wide range of disciplines
5. To educate the respondent group as to the diverse and interrelated aspects of the topic

While the range of uses of the Delphi technique has increased dramatically since the 1960s, the researcher must exercise care not to let the technique determine the problem. Uhl (1983, p. 84) suggested the Delphi technique may be warranted if any or all of the following conditions existed:

1. The resolution of a problem can be facilitated by the collective judgments of one or more groups
2. Those groups providing judgments are unlikely to communicate adequately without an intervening process
3. The solution is more likely to be accepted if more people are involved in its development than would be possible in a face-to-face meeting

4. Frequent group meetings are not practical because of time, distance, and so forth
5. One or more groups of participants are more dominant than another

Advantages of Delphi

Several advantages of Delphi studies have been noted in the literature. Assuming that the problem under investigation can benefit from subjective judgments on a collective basis, some specific advantages of the technique include: a convenient nontechnical methodology, participant anonymity, structured communication, and a pedagogical effect.

Convenient nontechnical methodology. Weatherman and Swenson (1974, p. 111) concluded that a Delphi "provides a means of obtaining information from a large number of persons without restrictions often imposed by geography and scheduling." Furthermore, these authors (1974, pp. 111-112) noted, a Delphi "is especially appealing because of ease of administration and relatively low cost when compared to the expense of convening a similar group." Nash (1978, p. 49) also suggested that a Delphi technique can be usefully employed with a population that is not research oriented. Individual panel participants are not assumed to have specific research skills, rather they are assumed to have first-hand knowledge of the topic under investigation.

Participant anonymity. According to Dunn (1981, p. 196), early applications of Delphi were motivated by a desire to overcome the ineffectiveness of committee and other group processes:

> The technique was designed to avoid several sources of distorted communication found in groups: domination of the group by one or several persons; pressures to conform to peer group opinion; personality conflicts and interpersonal hostility; and the difficulty of publicly opposing persons in positions of authority.

Structured communication. In a Delphi study the researcher has the capacity to structure the communication process so that maximum focus is placed on the topic under investigation. As Barrington (1981) pointed out, the role of the researcher as facilitator and editor allows that individual to simplify and clarify the issues at hand. Given the iterative nature of the communication process there is a built-in opportunity to revise opinions thereby allowing panel members a means of saving face, should this ever be of concern.

Pedagogical effect. Although on the whole quite critical of the Delphi as a forecasting tool, Weaver (1971, p. 271) claimed that the Delphi technique can be very useful as a pedagogical tool in that "it forces people to think about the future in a more complex way than they ordinarily would." For Weaver the potential of the Delphi to guide the thinking processes of panel members is one of

the technique's major advantages. Similarly, in their concluding remarks on the advantages of the Delphi technique, Weatherman and Swanson (1974, p. 112) observed that participants often look upon the experience of working through a Delphi study as an interesting and useful task.

Criticisms of Delphi

Weaver (1971, 1972) was critical of the traditional use of the Delphi as a tool used for making predictions on the timing of future events. For Weaver (1972, p. 6) a major weakness of the technique was that it lacked explanatory power. The outcomes of a forecast might be plausible enough, given that they were based on expert agreement, but for Weaver this was hardly sufficient as a basis for explanation.

Weaver was also concerned about the issue of forced convergence as it was found in many conventional Delphi studies carried out during the sixties. In particular, Weaver (1971, p. 270) felt that too much emphasis on convergence might lead to a tendency to shift toward the mean response regardless of what might be considered to be the correct response.

Perhaps the most scathing critique of the Delphi technique to date has been done by Sackman (1975). Sackman scrutinized the Delphi in detail and held it up against what he called the basic standards of empirical social

science as represented by the American Psychological Association standards. He (1975) considered the technique to be lacking in a number of areas including: interpretive standards, empirical validity, standards for the use of experts, theoretical standards, reliability, and experimental sampling standards.

Sackman's critique has itself been rebutted by a number of authors. Coates (1975, p. 193) refuted Sackman's attack on the Delphi by concluding:

> Sackman ignores the crucial point that Delphi is not a scientific tool, nor is it related to a scientific experiment or a scientifically structured activity. . . . The value of the Delphi is not in reporting high reliability consensus data, but rather in alerting the participants to the complexity of issues by forcing, cajoling, luring them to think, by having them challenge their assumptions.

Similarly, Linstone (1975, p. 573) discounted much of Sackman's critique as being too narrow and inappropriate:

> [Sackman's] tradition-bound attitude is not uncommon; it is in the same vein as the illusion that science is 'objective'. . . Orthodoxy faced with new paradigms often responds with sweeping condemnations and unwitting distortions. Poorly executed applications are brought forth to censure the entire method, quotations are taken out of context, the basis for criticism is left vague, significant supportive research and new directions are ignored, and irrelevant 'standards' are applied.

Taking a completely different tack, Linstone attempted to set his own criticisms of Delphi in a constructive key. He (1975, pp. 574-586) outlined a checklist of eight common pitfalls the designer of a Delphi should keep in mind when

setting up a study:

1. Discounting the future (This includes the tendency of individuals to ignore longer term in favour of short term interests in the hopes that additional options or solutions to currently unsolved problems will materialize.)

2. The prediction urge (This includes the tendency of individuals to favour certainty over uncertainty as it pertains to future events.)

3. The simplification urge (This includes many people's tendency to simplify issues without considering the holistic pattern.)

4. Illusory expertise (Linstone [1975, p. 581] observed, "a group of experts, each knowledgeable about one aspect of a complex system, does not necessarily comprise expertise about the total system.")

5. Sloppy execution (The researcher may make errors in designing the study, selecting panel participants, formulating the Delphi statements, or analyzing and reporting responses.)

6. Optimism-pessimism bias (This occurs when there is a bias toward overpessimism in long-range forecasts and overoptimism in short-range forecasts.)

7. Overselling (This occurs when there is a mismatch between user expectations and what the Delphi technique is capable of delivering.)

8. Deception (This occurs when the communication process is deliberately distorted and participants are manipulated inappropriately.)

Linstone (1975, p. 586) cautioned:

> While the Delphi designer in the context of his applications may not be able to deal with, or eliminate, all these problems, it is his responsibility to recognize the degree of impact which each has on his application and to minimize any that might invalidate his exercise.

The Concept of a Policy Delphi

The policy Delphi was developed in response to many of the more significant shortcomings of conventional Delphi studies. Dunn (1981, p. 196) suggested that the policy Delphi strives "to create new procedures which match the complexities of policy problems." One of the first individuals to employ a policy Delphi, Murray Turoff (1975, p. 84), explained:

> Delphi as it originally was introduced and practiced tended to deal with technical topics and seek a consensus among homogeneous groups of experts. The policy Delphi, on the other hand, seeks to generate the strongest possible opposing views on the potential resolutions of a major policy issue . . . a policy issue is one for which there are no experts, only informed advocates and referees.

The objective is to identify all the opinions and supporting evidence for the consideration of decision-makers. As Turoff (1975, p. 84) observed, "the policy Delphi is . . . a tool for the analysis of policy issues and not a mechanism for making a decision."

Unlike a conventional Delphi the policy Delphi is not particularly aimed at generating a consensus. In many policy studies the structure of the communication process as well as the choice of the respondent group may be such as to make consensus on a particular resolution to a policy issue next to impossible to achieve (Turoff, 1975).

The policy Delphi acts as an adjunct to the committee process; it is not a substitute for the committee or the

activities normally associated with the committee process. Turoff (1975, p. 87) explained:

> [The policy Delphi] is merely an organized method for correlating news and information pertaining to a specific policy area and for allowing the respondents representing such views and information the opportunity to react to and assess differing viewpoints.

The goal is to structure the communication process so as to expose all the differing positions advocated and where possible to determine the pro and con arguments for those positions.

Delphi Applications in Postsecondary Education

The Delphi technique has received a good deal of attention in postsecondary research. Preble (1983, p. 81) reported that the range of applications to date clearly demonstrates that the technique "is capable of satisfying a wide range of educational research needs." This section will briefly highlight the findings from a selection of review articles.

Judd (1972) provided one of the first reviews of Delphi studies in higher education. He (1972, p. 174) concluded that the majority of applications in education were concentrated in three major areas:

1. Educational goals and objectives
    - generalized
    - area and state-wide
    - university and college-wide

2. Curriculum and campus planning
3. Development of evaluation criteria
    - rating scales
    - effectiveness and cost/benefit measures

In considering the eighteen articles contained in his review, Judd noted a number of interesting methodological deviations from the conventional use of the Delphi technique. Some of these deviations were clearly regretted by the researchers whereas others were viewed as constructive innovations that added to the flexibility and usefulness of the technique.

Judd (1972, p. 180) identified three methodological issues he considered of central importance in the application of the Delphi technique to research in higher education:

1. Selection of the panel
2. Character of round one
3. Consequences of feedback

Judd cautioned that each of these issues presents significant challenges in the use of the Delphi. He suggests that further research effort should be directed towards these issues in order to improve the value of the technique to educational research.

Another review of the Delphi technique in education was conducted by McGaw, Browne, and Rees (1976). Similar to Weaver (1972), these authors differentiated between the exploratory and the normative uses of the technique.

Whereas the exploratory Delphi seeks to develop a picture of the future, the normative Delphi is a systematic attempt to shape the future in the direction of desired goals and objectives. By far the majority of educational applications of Delphi are normative in nature.

Of the sixteen studies reviewed by McGaw et al. (1976), all but two were normative in character. These authors (1976, p. 61) speculated:

> This preponderance of the normative over the exploratory may well derive from the view that nothing in the educational future is necessarily inevitable, that with systematic information about the desired goals the future is manipulable.

The normative studies were reviewed according to categories based on the populations from which the sample of respondents were drawn. Three categories of respondent groupings were identified: a single group of expert respondents; several groups of expert respondents; or a range of client and interest groups as respondents. The assumption was that the choice of respondents was functionally related to the ultimate purpose of the applications.

Over the period of time that the Delphi technique has been employed, numerous modifications to the original procedures have occurred. McGaw et al. (1976, pp. 60-61) summarized some of these modifications as being concerned with:

1. The distinction between questions of likelihood of occurrence and desirability
2. The use of various feedback procedures for reporting group responses, including the feedback of reasons for responses
3. The use of increased ranges of criteria against which participants are required to judge events such as likely consequences, projected interventions, and the desirability of the events (or policy)
4. The use of a number of sub-populations of respondents, rather than a single population
5. The collection of judgments of timing for future events as a period between earliest and latest dates rather than a single date
6. The use of self-appraisal of expertness by respondents to weight item responses in order to improve reliability

These modifications, according to McGaw et.al.(1976), enhance the range, applicability, and utilization of the Delphi technique.

Nash (1978) provided additional insights into the strengths and weaknesses of the technique. He reviewed eight Delphi studies in education using the same framework as that used by Judd (1972) outlined above. As part of his review he identified a number of specific concerns about the way the Delphi has been used in educational research. In general, Nash (1978, p. 46) found the bulk of educational studies:

1. Do not use experts, even broadly defined
2. Do not consistently employ item generation

3. Do not become concerned explicitly with the short- or long-range future
4. Are frequently susceptible to experimenter bias, particularly in the statement categorization phase
5. Do not provide personality or demographic data on subjects
6. Do not explore characteristics of nonrespondents
7. Do not treat interval between rounds as a potentially significant variable
8. Do not examine either participant commitment or fatigue

Nevertheless, in spite of these concerns, Nash found the technique to be useful, particularly in research areas that are ill-defined and difficult to specify in advance.

Using the Delphi

Uhl (1983, p. 88) provided a short set of planning guidelines for the researcher considering setting up a Delphi study:

1. Be certain there is not a simpler and less costly procedure that will achieve the same results
2. Do not underestimate the time and resources needed to provide the necessary feedback
3. Select the participants with care and in a manner consistent with the objectives of the study
4. Use unambiguous statements, neither too vague nor too specific, to obtain valid and efficient input from participants
5. Do not mislead the participants
6. Do not ignore the responses of participants who disagree with the majority

7. Do not impose the views and biases of the study designers on the participants

8. Allow enough time between rounds to prepare and distribute feedback, but do not allow so much time that participants lose interest in the study

9. Provide participants with enough incentive to remain interested throughout the study

These guidelines, along with positive features from a number of the studies referred to above, have influenced the development of this research project.

The approach used in this study has been outlined in some detail in the section on research procedures. Nevertheless, there were a number of features of the particular methodology employed in this study that are worthy of comment before leaving this discussion of methodology. These features are outlined in the paragraphs below.

A systematically selected panel. The selection of panel members for this research placed a heavy emphasis on individual reputation and expertise; positional power and influence; and regional and functional diversity. Panel members were carefully selected from the population of administrators with senior responsibilities in the college system. The design of the panel structure was intended to ensure a diversity of opinions and perspectives.

A semi-structural open-ended interview format. In the first round, and again in the fourth, an open-ended interview format was employed. In the first round the

objective was to elicit the identification of a comprehensive and diversified range of programme related issues. An open-ended format was chosen to encourage the maximum opportunity for issues to be identified. Similarly, in the fourth round an open-ended format was chosen to ensure maximum flexibility and opportunity to identify strategies and policy implications.

The clarification of reasons for importance. In the first round interviews panel members were encouraged to provide reasons for the importance of the issues they identified. This was requested in order to assist the researcher in interpreting the intent of the interview data.

An opportunity to adjust ratings. In the second round panel members were requested to provide importance and impact ratings for each of the issues identified in the first round. Panel members were given an opportunity to review and adjust their individual second round ratings in the third round with the benefit of the collated scores for each item, but without an undue emphasis being placed on forced convergence.

An opportunity to synthesize. In the final round panel participants were asked to synthesize their thoughts on the issues identified in the pervious rounds. The objective of the round was to outline normative strategies for addressing the issues and to elicit implications for

policy development at the system and institutional levels.

A final report. The chapter on policy implications summarizes the collective thoughts of the panel members on the issues identified in this study. This summary and the metapolicy propositions associated with each major issue category should provide useful input into the deliberations of future committee work.

A pedagogical effect. The experience of participation in this study, if successful, may have had a pedagogical effect on the panel participants as they consider the implications of the issues identified during the study for their own organizations.

Focus of the Study

This study considered the entire British Columbia college system as a single subject or setting. At the same time, however, it is important to recognize that the system encompasses a number of constituent parts. The fifteen individual colleges that make up the British Columbia system are dispersed throughout the province. In effect, the concept of system is more a mental construct than a reality; only the individual institutions and the Ministry of Advanced Education and Job Training as the coordinating agency are tangible. The focus of the research tended to concentrate at the provincial or system-wide level. Where issues were identified as concerns of particular subgroups

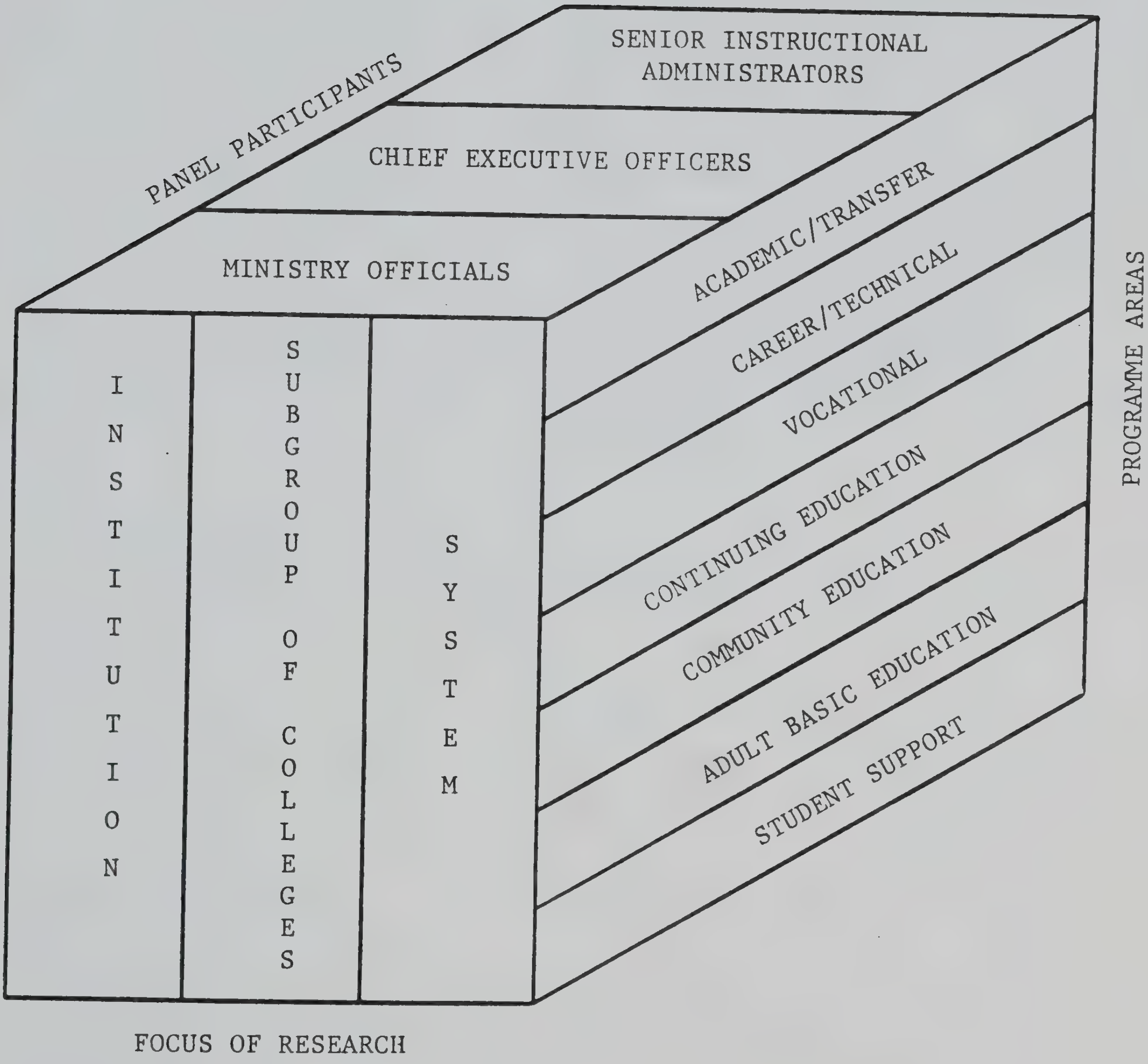
of colleges or individual colleges, the issues were considered in the analysis but the particular colleges were not (See Figure 4.1 Focus of Research).

The Panel

Delphi studies are set up as a series of iterative interactions with a predefined panel of participants. According to Turoff (1970), the major potential limitation in a policy Delphi study was a severe constraint on the diversity of the respondent group and the resulting limits this places on the meaningfulness of the exercise. Turoff (1975, p. 88) felt it was necessary in a policy Delphi "that informed people representative of the many sides of the issues under examination [were] chosen as participants." Furthermore, in selecting panel participants, Turoff (1970, p. 156) recommended:

> It is preferable that the respondent group be composed of individuals at a fairly high level of responsibility.

The panel members in this research were drawn from three distinct subgroups of influential actors in the system: senior officials in the Ministry of Advanced Education and Job Training, chief executive officers, and senior instructional administrators from the institutions (See Figure 4.1 Panel Participants). Ministry officials were selected for their perspective at the system coordination level. Chief executive officers were chosen



Components of Analysis

Figure 4.1

because they have a unique perspective of the relationship between the institutions and the environment. Likewise, senior instructional administrators were chosen because of their perspective on the issues emerging in the various programme areas. Panel members were asked to identify issues emerging within the major programme areas found in the British Columbia college system (See Figure 4.1 Programme Areas).

The iterations lasted through four rounds. The material collected in one round was used as the basis for the preparation of the next round. The same panel of influential actors was asked to refine the information in the study over the four separate rounds.

Panel Selection

Selecting informed and capable individuals to serve on the panel in a Delphi study is critical to the eventual success of the research. According to Bailey (1982), the advantage of purposive sampling is that the researcher can use his or her research skills and prior knowledge to choose respondents. The researcher can choose those who best meet the purposes of the study.

Since this research involved a policy Delphi methodology, it was important that a wide diversity of opinion on the panel was obtained. In order to achieve that diversity and at the same time to control for

researcher bias in the selection of panel members, three decision rules were used to guide the selection of panel members for this study. The first of these decision rules was based on a positional approach to the identification of informed participants (Bauer and Gergen, 1971). As mentioned above, panel members were drawn from three distinct subgroups of influential actors in the college system. These subgroups were selected on the basis of their formal positions in college leadership.

The eight Ministry of Advanced Education and Job Training panel participants included almost the entire population of senior officials in the Ministry. These members were identified in consultation with the assistant deputy minister.

The second decision rule involved a reputational approach to the identification of informed participants (Bauer and Gergen, 1971). The college participants were selected using decision rule number two. Five individuals were asked to nominate eight chief executive officers and eight senior instructional administrators from an inclusive list of both groups. The individuals asked to make these nominations represented a range of perspectives on the college system and were all very familiar with senior personnel in the colleges (See Table 4.1 for a listing of their positions). They were asked to identify potential panel participants who they thought would be knowledgeable,

Table 4.1

Persons Nominating Panel Participants

Assistant Deputy Minister, Advanced Education and Job Training

Ex-Executive Director, British Columbia Association of Colleges

Institutional Evaluation Officer, British Columbia Council of College and Institute Principals

President, Open Learning Institute

Professor of Higher Education , Faculty of Education, University of British Columbia

willing to participate, and represent a diversity of opinion about the purposes of the college system. The nominations were collated and those individuals with the largest number of nominations were asked to participate on the panel subject to the limitations provided by decision rule number three.

The third decision rule was intended to ensure at least some degree of representativeness of the entire college system. Decision rule three simply required that there was participation from metropolitan, nonmetropolitan, and remote colleges. Whether or not the individual selected from each college was a chief executive officer or a senior instructional administrator depended on the previous decision rule and on the need to maintain a proportional balance between the three subgroups. In some cases both the chief executive officer and a senior instructional administrator were nominated from the same college. This was allowed as long as it was consistent with the three decision rules outlined above.

Panel Characteristics

Table 4.2 provides profile information on the educational qualifications and employment history of panel members for each of the three groups participating in the study. The Ministry of Advanced Education group (MINs) was made up of eight individuals with senior level programme

TABLE 4.2

Profile of Panel Members

	Highest Educational Qualification			Years in Present Position		Years in Previous Position		Years in Postsecondary Education	
	Bachelors	Masters	Doctorate	Mean	S.D.	Mean	S.D.	Mean	S.D.
Ministry Officials	3	2	3	6.8	4.1	5.9	3.7	15.5	4.7
Chief Executive Officers		5	3	5.1	2.1	6.3	2.4	21.1	6.3
Senior Instructional Administrators	2	2	4	6.4	3.6	5.5	1.9	18.5	4.1

and managerial responsibilities. Their educational qualifications ranged from the Bachelor's to the Doctoral level. Four of the eight had a post-graduate specialization in educational administration. The remaining members of this group had degrees in the social or natural sciences. The mean number of years in their present position was 6.8 years. A number of the group had college related work experiences before joining the Ministry of Advanced Education. The mean number of years of postsecondary experience for this group was 15.8.

The profile of college chief executive officers (CEOs) reveals that their qualifications were at the Master's level and higher. Four of the eight CEOs indicated a post-graduate specialization in educational administration. The remaining four were split evenly between psychology and the natural sciences. The CEOs had served an average of 5.1 years in the present position with a range of 1 to 7.5 years. Seven of the eight CEOs had held senior administrative positions either at the president or vice president level in their most recent previous positions. The mean number of years in post-secondary education for CEOs was 21.1 years.

The senior instructional administrators (SIAs), like the Ministry officials, had educational qualifications that ranged from the Bachelor's to the Doctoral level. Only one of this group had a background of formal studies in

educational administration. The remainder had degrees in a wide diversity of academic and professional disciplines. The mean number of years in their present position was 6.4, with many having experience in closely related responsibilities in their most recent previous positions. The mean number of years in postsecondary education for academic administrators was 18.5.

In summary, a comparison of these three groups reveals that college CEOs had served less time on average in their present positions than had the other two groups. They had, however, on average, accumulated the longest number of years of experience in the postsecondary education field. Ministry officials, on the other hand, had served the longest number of years in their present positions, but had, on average, accumulated a shorter number of years of overall experience in the field. Senior instructional administrators tended to range between the two other groups.

Research Procedures

Most of the information obtained in this study was collected using a Delphi methodology. It was difficult to separate instrument development from procedures of data collection and analysis. In this section each round of the Delphi process, including the preliminary pilot study, is described. Comment is provided on instrument development,

data collection procedures, and data analysis procedures for each round. The packages for each round are included in Appendices I to IV. Table 4.3 illustrates the method of data collection and number of participants in each round of the study. Supplementary information for the analysis section of the fourth round was obtained from selected institutional documents (i.e. institutional evaluation reports).

The Pilot Study

Prior to the Delphi study getting underway a limited pilot study was conducted. The purpose of the pilot study was to refine the preparation of the interview schedule for round one. Care was taken by the researcher to select a format for the first round that would provide a degree of structure for the interview and at the same time be open enough not to constrain the flow of ideas from panel participants. For as Salancik, Wenger, and Helfer (1971, p. 65) quite rightly observed, in both the role of questioner and that of recorder "the investigator inevitably influences the quality and usefulness of the responses he receives." The feasibility of the interview prompts and usefulness of the accompanying explanatory material were also assessed.

The pilot study involved a group of six individuals: the president and two senior managers from a community

Table 4.3

Method of Data Collection and Number of Participants

Round	Method of Data Collection	Number of Participants
pilot study	open-ended interview	6
round one	open-ended interview	24
round two	questionnaire	22
round three	questionnaire	10 *
round four	open-ended interview	24

* ten panel members returned their questionnaires; the remaining panel members all indicated their desire to leave the ratings as submitted in the previous round.

college in Alberta, and an assistant deputy and two senior officials from the Department of Advanced Education in Alberta. A draft interview format was delivered to pilot study participants along with an explanatory handout outlining what a Delphi study is and providing an illustrative example. Participants were asked to provide answers to the interview questions and to comment on the interview guide and accompanying material.

A number of minor adjustments to the material sent out to panel members in advance of the round one interviews were made as a result of the suggestions received during the pilot study. Increased emphasis was put on asking panel members to elaborate on the issues they identified by asking them to provide reasons for their choice of issues.

Round one: Instrument Development

The interview format employed in round one provided minimal restrictions on panel members' responses. The interview prompts were purposefully open-ended. A copy of the interview schedule was distributed to all panel members in advance of the interviews. Panel members were encouraged to reflect on the Mission, Goals and Objectives document from the Ministry (1986) and to identify emerging issues in each of the following programme areas:

1. Academic/transfer (university level; general education)
2. Career/technical (paraprofessional training)

3. Vocational (trades; job preparation)
4. Continuing Education (job-related upgrading; part-time vocational)
5. Community Service (general interest; community forums; etc.)
6. Adult Basic Education (academic upgrading; ESL; etc.)
7. Student Support (library; adult special ed.; counseling)
8. Other (you define as needed)

These areas were selected to reflect the diversity of programme activity found in the British Columbia college system. Panel members were also requested to provide reasons for the importance of the issues that they identified. This was requested primarily to assist the researcher in the interpretation of the interview data.

The round one package included the following materials:

a. a covering letter
b. a personal data sheet
c. a short explanation of the Delphi process with an accompanying example
d. an interview schedule with accompanying explanatory instructions
e. self-addressed envelope

Examples of these materials are provided in Appendix I.

Round One: Data Collection Procedures

Prospective panel members were contacted in person by

telephone and invited to participate in the study. All but one of those invited to participate on the panel agreed to do so. The one individual who refused the invitation to participate was replaced by the next highest nominee in that particular sub-group. A package of round one material was sent out in the mail to panel members on the same day they were contacted by telephone. Interviews were arranged at the earliest convenient date after initial contact.

An interview format was selected for the first round of the Delphi process in order to take advantage of the inherent strengths of this technique. Ary, Jacobs, and Razavish (1985, p. 342) suggested that an interview has an advantage over questionnaires in that ". . . personal contact increases the likelihood that the individual will participate and will provide the desired information." Gorden (1980) outlined a number of additional advantages to the interview. A significant one for this study was that the interviewer was able to guide a panel member's interpretation of the interview prompts, while at the same time having the flexibility to probe further when the situation warranted.

The data for the first round were collected over the period from the last week of May, 1986 to the last week of August, 1986. Twenty-three of the twenty-four interviews had been completed by mid-July. The twenty-fourth interview was delayed as the panel member cancelled the

original appointment and was not available for the remainder of the summer.

The researcher toured the province to meet with most of the panel members at their individual institutions. Two of the panel members were contacted while they were in Vancouver on other business. Interviews ranged in length from three-quarters of an hour to two hours. The interviews were taped and the researcher made rough notes during the interviews. Panel participants received assurances of anonimity and the tapes were erased after the researcher had finished with them.

Round One: Data Analysis Procedures

Both qualitative and quantitative methods of data analysis were used to analyze the round one interview data. The objective of the analysis was to extract the information obtained in the interview data in order to present the issues identified in a questionnaire format for the second round. The primary technique employed was content analysis. Holsti (1969, p. 109) defined the purposes of content analysis, as with any systematic inquiry, as seeking to ". . . make valid inference from data," the ultimate aim being that of enhancing understanding.

Carney (1979, p. 149) identified the procedures in carrying out a content analysis to include: ". . . extracting data; classifying and weighing those data;

criteria used in assessing them; reliability measures, and checks on inference." These procedures have been reported in this study under the following headings: unitizing the comments, coding and sorting, determining categories and resorting.

The categories and their associated resorted responses were used as the basis for the development of the second round questionnaire. Each procedure is described in greater detail below.

Unitizing the comments. As soon as possible after each interview, the researcher listened to the tapes at least twice and made detailed notes on the issues identified. These issues were written out in list form, one for each panel member. A total of 481 issues were identified from the material collected during the first round. The number of issue statements for each sub-group on the panel ranged from 155 for the Ministry officials to 165 for senior instructional administrators (see Table 4.4).

This procedure was a critical step in the analysis and as such the question of reliability was considered to be of importance. Kerlinger (1979, p. 132) defined reliability as the degree to which an observation or measurement is accurate, dependable and predictable. Reliability is concerned with the degree of stability of the observations. In the context of considering the reliability of

TABLE 4.4

Number of Programme Issues Identified During the Round One Interviews by Panel Member Sub-Groups

Panel Members	Ministry Officials	Chief Executive Officers	Senior Instructional Administrators	
1	16	23	18	
2	13	21	24	
3	19	19	21	
4	23	23	16	
5	22	19	24	
6	23	22	27	
7	23	15	23	
8	16	19	12	
				Grand Total
Total	155	161	165	481
Range	13-23	15-23	12-27	
Average	19.4	20.1	20.6	

reliability of establishing units in content analysis, Carney (1979, p. 200) posed the following:

> Would someone else doing the counting come up with a different number, or differing proportions, of units?

In this phase of the study the researcher asked a knowledgeable colleague, not otherwise involved in the study, to unitize the comments from a sample of interviews. Instructions on how to unitize comments were provided to the colleague in advance, but not instructions on the specific content from the sample interviews. Three interview tapes were reviewed by the independent rater, one tape from each sub-group in the panel. The issues identified by the independent rater were compared with those identified by the researcher from the same tapes. The measures of inter-rater reliability for each sample were 0.90, 0.86, and 0.93, respectively.

Coding and sorting. During the next step the lists of issues were transcribed onto file cards by panel member, panel subgroup, and programme area. These file cards were colour-coded according to panel subgroup, labelled according to programme area, and numbered with an individual panel member identifier. Once coded the file cards were sorted by programme area. The number of issue statements ranged from a low of 40 statements for the community service programme area to a high of 76 for the vocational programme area (See Table 4.5).

TABLE 4.5

Number of Issues Identified During the Round One Interviews by Programme Area and Panel Member Sub-Group

Programme Area	Ministry Officials	Chief Executive Officers	Senior Instructional Administrators	Total
Academic/Transfer	20	22	25	67
Career Technical	27	22	26	75
Vocational	30	20	26	76
Continuing Ed.	18	17	15	50
Community Service	10	16	14	40
A.B.E.	18	17	18	53
Student Support	11	21	18	50
Other	21	26	23	70
Totals	155	161	165	481

Defining categories and resorting. Carney (1979, p. 167) observed that ". . . a content analysis can be only as good as its categories." Furthermore, he noted that the categories have to be such that an item can be classified under only one of them, not under several. In addition, all categories should be related to a uniform system of classification. This is consistent with de Sola Pool's (1959, p. 204) comments from an earlier discussion of content analysis in which he concluded that ". . . categories of analysis should be related to the structure of the material under discussion . . ."

In this step of the study the separate piles of file cards organized under programme areas were analyzed into tentative issue categories. Repetitious and vague statements were eliminated. This procedure was repeated over several trials until clearly discernible issue categories were identified. These issue categories or issues as they are referred to throughout the remainder of the study were listed in turn under each programme area.

During the resorting phase several issue statements were shifted from one programme area to another. Eight statements were moved from under the academic/transfer area to the career/technical area. One statement was moved from career/technical to student support. Two vocational issue statements were moved to student support and seven vocational issue statements were moved to career/technical.

Ten statements were moved from community services, five to continuing education, four to student support, and one to other. Five statements were moved from adult basic education, three to student support and two to other. Two statements were moved from student support to career/technical. Four of the five issue statements moved from other went to career/technical and the remaining statement was moved to student support.

The initial list of 481 issue statements was reduced to 94 during the resorting phase. Each of the 94 issues was stated in an explanatory statement and included in a first draft of a second round survey instrument.

The draft questionnaire was shared with members of the supervisory committee, other members of the Educational Administration department, and fellow students in September, 1986. The suggestions received encouraged the researcher to make the statement of issues consistent in format, and to reduce the number of issues. These suggestions were incorporated into the subsequent redraft of the questionnaire. During the redrafting process twenty issue statements were dropped from the study. Only issues identified by two or more panel members were retained for the second round. In addition, the issues were restated in a consistent format for ease of interpretation. A final list of 74 issues was included in the round two survey instrument.

Round Two: Instrument Development

The round two instrument consisted of a survey instrument containing the 74 issues identified during the previous round. These issues were grouped under the eight programme areas employed earlier. Panel members were requested to rate the importance of each issue on a five-point scale. In addition, panel members were requested to indicate the level within the college system at which the issue was most likely to have an impact. The covering sheet of instructions included an example and an explanation of the rating scales.

High importance was defined in terms of an issue assuming major importance during the five-year planning cycle under consideration in this study. Conversely, low importance issues were defined as those which at any time, would have low importance, or at least, not likely to be of high importance over the same five-year time span. The impact of the issues was assessed using a three-level scale. The objective of this scale was to assess the pervasiveness of the impact of each issue on the system. Issues were rated as institution specific, subgroup of colleges, or system-wide, each rating being progressively more comprehensive in scope than the former one.

The second round package of materials included:

a) a covering letter

b) a survey instrument with a covering sheet of instructions

c) a self-addressed envelope

Examples of these materials are provided in Appendix II.

Round Two: Data Collection Procedures

The second round survey instrument was distributed to panel members in early October, 1986. A survey instrument format was chosen for this round because it has the advantage of being less time-consuming than the interview. Ary, Jacobs, and Razavieh (1985, p. 344) have also noted that the survey instrument is more confidential than the interview and hence may elicit more truthful responses. The main disadvantages of the survey instrument are the possibility of respondents misinterpreting the questions, and the problem of response completion rate.

Follow-up telephone interviews with panel members indicated very few problems of the former type were encountered. The most significant problem in round two was that two panel members did not return the survey. Numerous telephone calls were made and letters were written, but no survey instruments were returned from these two individuals. No reasons were given for the non-return of questionnaires.

Another concern that began to emerge during the second round was the dynamic nature of employment for panel members. Eight of the twenty-four panel members had

changed employment since the start of the study. Three of those eight were no longer directly involved in the college system. In total, the time involved in collecting round two survey instruments was approximately three weeks longer than anticipated.

Round Two: Data Analysis Procedures

The analysis of round two data was primarily quantitative in nature. The importance and impact ratings were tabulated for the twenty-two panel members responding to this round. A master key was produced, including a frequency count for both scales for each of the 74 issues contained on the survey. This summary master key was used as the basis to produce the round three survey document.

In addition to the frequency tabulations mentioned above, the importance ratings were further analyzed using descriptive statistical measures. In general, any frequency distribution can be described using a limited number of statistical characteristics. Each of the issue statements was analyzed independently to determine the following characteristics for the distribution of responses:

a) mean

b) coefficient of variation

c) coefficient of skewness

These statistical measures were used to compare the

measures calculated from round two data with a similar set of measures derived for the round three data.

Round Three: Instrument Development

The responses to the second round survey instrument were summarized as frequency counts in preparation for round three. A master key was prepared which included the tabulated frequencies for both the importance and the impact rating scales. The individual responses received from panel members during the round two survey were transposed onto separate copies of the master key. This was done to allow panel members to review the summary responses and to note their particular responses relative to that summary. As part of the third round, panel members were invited to alter their previous responses in light of the summary data if they chose to do so. This strategy was seen to be consistent with the principles of a Delphi research methodology as described above.

The third round package of materials included:

a) a covering letter containing instructions for the round

b) an individualized survey instrument

c) a self-addressed envelope

Examples of these materials are provided in Appendix III.

Round Three: Data Collection Procedures

The third round survey instrument was distributed to

the twenty-two panel members responding to the second round in early January, 1987. Panel members were invited to make any adjustments to the previous responses they felt were appropriate in light of the summary responses. Panel members were also told that if they chose not to make any adjustments that their previous responses would be used in the round three analysis.

Ten of the twenty-two survey instruments distributed were returned. Of those ten, one survey instrument was returned unchanged from the previous round. In addition, two panel members telephoned the researcher to indicate in advance of the return deadline that they would not be returning their forms because they did not wish to alter their ratings from the second round. After the deadline was passed in early February, the researcher telephoned the remaining panel members to enquire about the progress of the survey. Without exception all panel members contacted indicated that it was their intention not to return the survey because they wished to maintain their ratings from the second round.

Round Three: Data Analysis Procedures

Like the round two analysis, the analysis of round three data was primarily quantitative in nature. Once again, the importance and impact ratings were tabulated. A master key of round three data was produced which included

a frequency count for the importance scale and the impact scale for each of the 74 issues.

In addition to the frequency tabulations, the importance ratings were further analyzed using descriptive statistical measures. Each issue statement was analyzed independently to determine the following statistical characteristics for the distribution of responses:

a) mean
b) coefficient of variation
c) coefficient of skewness

These statistical measures were used in a comparison with a similar set of measures derived for the round two data. The comparison is reported and discussed in the next chapter.

Round Four: Instrument Development

The fourth round interview schedule was developed using the list of issues from the third round survey with a mean score of 4.0 or higher. Twenty-two issues were so rated. These issues were clearly ranked by panel participants to be of major importance during the remainder of the current planning cycle.

Rather than use the issues independently, they were grouped into seven major issue clusters for the interview schedule. The major issue clusters were provided with a generic label to facilitate panel member responses during

the fourth and final round of the Delphi process. Under each of the seven issue clusters, the associated issues were listed and an interview question was formulated. The interview question prompted panel members to identify strategies or adjustments to plan for or cope with the impact of the issues under consideration. Panel members were invited to respond to at least two levels of concern: the individual college level and the system level. Finally, panel members were asked to reflect on what they saw to be the policy implications, if any, of the strategies/adjustments they had identified. The fourth round package included the following materials:

a) a covering letter
b) an interview guide

Examples of these materials are provided in Appendix IV.

Round Four: Data Collection Procedures

Panel members were all contacted in person by telephone to arrange for an interview appointment. The round four package of materials was distributed in advance in order that panel members would be forewarned of the need to identify convenient interview times in advance of this first telephone call.

All twenty-four interviews were conducted within a period of four weeks from March 10 to April 2, 1987. Only two of the interviews were conducted in person. The

remaining interviews were all conducted over the telephone The same interview guide was employed in every interview. All interviews were taped and the researcher made rough notes during the interview. Verbal permission was obtained in advance, usually during the first telephone call and again at the start of the scheduled appointment, to tape the interview. The researcher initiated the telephone contact for the interview appointments. Interviews ranged from forty-five minutes to one and one-half hours in length.

Round Four: Data Analysis Procedures

The transcripts resulting from the round four interviews were used as the primary data source for the analysis in this the final round of data gathering in the study. Each taped interview was transcribed verbatim into a print format resulting in 298 pages of single-spaced text. One taped interview was lost due to a malfunction in the recording device. The researcher's notes of the interview were used as a substitute in this particular case.

The data were analyzed using both qualitative and quantitative methods. As was the case in the first round, the primary technique employed in round four was content analysis (described in detail above). The issue clusters identified in advance of the fourth round interviews were

used to provide a general structure for the analysis. Within these clusters the comments were unitized, coded and sorted, and organized into subcategories and resorted. The frequency of comments under each of the subcategories was recorded and reported in the next chapter. The subcategories were used as the basis for the metapolicy propositions reported in chapter six.

In order to supplement the material obtained from the analysis of the fourth round interviews, the researcher reviewed a selection of six recently completed institutional self-study documents. These documents were produced as a result of the institutional evaluation process discussed in chapter three. The information gleaned from these sources was used to assist in verifying the perceived importance of the issues identified in the Delphi process. This supplementary information was also useful as a complement to the strategies for addressing issues and deriving the implications for policy development that were identified by the Delphi panel.

Summary

This chapter has described the research orientation, methodological framework, research design, and research procedures utilized in the study. The objective of the research was to provide metapolicy propositions that might be used to guide policy development for the college system.

Intuitive forecasting was presented as one means of studying alternative futures that may provide the contexts for the development of new policy options.

A Delphi technique was employed as the primary means of data gathering in the study. The technique was discussed in some detail. Common uses, major advantages and disadvantages were identified, and the differences between a conventional and policy Delphi were noted. A limited selection of Delphi applications in education were reviewed, followed by an outline of the features and limitations of the present study.

Panel members for the study were drawn from three major sectors of the colleges and institutes system: the Ministry of Advanced Education and Job Training, chief executive officers of colleges, and senior instructional administrators from the colleges. Eight individuals from each sector were identified, using a specified sampling procedure, and invited to participate in the study.

The Delphi proceeded as follows:

1. Panel members were interviewed in person during the first round and asked to identify the programme issues expected to emerge over the next strategic planning cycle (five years). Data gathered from the round one interviews were summarized and categorized into 74 issue categories. These issues were used to create a second round survey questionnaire.

2. Panel members were asked to rate the importance of each issue and to assess the locus of impact on the college system. Data gathered from round two were summarized and reported back to panel members on individualized survey instruments in the third round.

3. Panel members had the opportunity to review their round two responses in light of the summarized information and to modify their responses if they so desired. Fifty-two of the round three issues were dropped from further analysis in the interview guide prepared for round four.

4. In the fourth and final round, the twenty-two remaining issues were grouped into seven major issue clusters. These seven clusters were presented to panel members on a formal interview guide. During this last round, panel members were asked to reflect on the strategies that might be employed at the individual college level or at the system level to address the issues identified. Panel members were also asked to identify any implications for policy development they thought were of importance.

CHAPTER V

DISCUSSION AND ANALYSIS

This study employed a Delphi methodology to elicit the views of a panel of influential participants. The research was carried out in four distinct phases, each phase corresponding to one round of the Delphi process. In order to facilitate the description and analysis of the data obtained during the study each round is examined sequentially in a separate section of this chapter. Each section provides a statement of the purpose(s) of the round along with a brief description of the instrument used to procure the data, and a description and analysis of the findings.

Round One

The purpose of round one was to identify emerging issues in each of the major programme areas commonly found in British Columbia community colleges. Participants were encouraged to limit their consideration of issues to those issues that were emerging, or would be emerging during the 1986-1991 planning cycle.

An interview format was employed in the first round. Panels members were provided with an interview format that contained open-ended statements in each of eight different programme areas. Seven of the programme areas were those commonly found in the British Columbia college system.

These areas included: academic/transfer, career/technical, vocational, continuing education, community service, adult basic education, and student support. The eighth area, "other," was intended to be used for identifying programme issues that did not fit into any of the previous areas. During the interview panel members identified issues under each programme area listed in the interview format, and, where possible, provided reasons why they saw the issues as important for the colleges and for the college system as a whole. Opportunity was provided for additional comments at the end of the interview.

Discussion and Analysis

The data collected for the first round interviews were collated and summarized according to the procedures outlined in Chapter IV. Table 5.1 lists, in abbreviated form, the 74 issues under the eight programme areas provided. The table also includes an indication of the number of times each issue was identified by panel participants during the first round interviews. These issues were used as the basis for the second round questionnaire (See Appendix II).

All panel members identified issues in each of the programme areas. Not surprisingly, the areas that attracted greatest attention tended to have as their goal the production of a skilled workforce, although a large number of issue statements were generated in the more

TABLE 5.1

Programme Issues Identified During the Round One Interviews *

Issues	Issue #	# Times Identified
A. Academic/transfer		
- limit on number of transfer students	5	13
- renewed interest in outcomes measures	6	9
- relationships between post-secondary institutions offering academic education	2	8
- threat of reduced funding support for academic programmes	9	6
- lack of Associate degree	4	5
- increased workload and productivity	8	4
- viability of second-year academic programmes	1	2
- articulation between colleges and high schools	3	2
- demand for specific "core" curriculum	7	2
B. Career/technical		
- specific job-related skills versus broadly-based generic skills	11	22
- equipment maintenance and replacement	16	15
- faculty renewal, retraining and curricular revision	23	10
- effect of low employment markets on programmes	20	6
- influence of computer on curriculum	10	5
- duration of high technology programmes	15	5

TABLE 5.1 (cont'd)

Issues	Issue #	# Times Identified
B. Career/technical (cont'd)		
- flexibility of instructional design and delivery	21	5
- attracting well-prepared students to high technology programmes	22	4
- bridging of programmes	12	3
- effect of "centres of excellence" on comprehensiveness	14	3
- cooperative work experience model	17	3
- increased pressure for programme substitution	19	3
- effective use of advisory committees	13	2
- role of external accreditation bodies	18	2
C. Vocational		
- adequacy of apprenticeship system	26	13
- reduced C.E.I.C. seat purchases	25	11
- employer-based training	24	9
- industry contact for instructors	31	6
- low levels of employer demand	32	6
- generic level skills in trades training	27	4
- statement of purpose for trades programmes	30	4
- rigidity of programme delivery formats	28	3

TABLE 5.1 (cont'd)

Issues	Issue #	# Times Identified
C. Vocational (cont'd)		
- centralized control of public colleges	29	2
- competency-based training	33	2
D. Continuing education		
- importance of maintaining a viable infrastructure	37	12
- demands for part-time access and short-term occupational upgrading	40	10
- competition with private sector educational alternatives	39	8
- unequal treatment of cost recovery versus subsidized programmes	35	7
- emerging importance of part-time and occupational upgrading	34	5
- retraining the un- and under-employed	38	4
- quality control for short-term programmes	36	3
E. Community services		
- coordination of community-based systems	43	5
- local economic development initiatives	45	5
- focus on community related issues and events	44	4
- differences between non-metropolitan and metropolitan colleges	41	2
- maintenance of store front operations and small regional centres	42	2

TABLE 5.1 (cont'd)

Issues	Issue #	# Times Identified
F. Adult basic education		
- provincial commitment to adult basic education	51	14
- high levels of adult illiteracy and the need for new instructional methods	50	10
- balance between functional skills for work and academic oriented objectives	49	8
- relationship between school districts and colleges	48	6
- articulation between ABE programmes, high schools, and other college programmes	47	5
- effect of immigration policies and international education initiatives	46	2
G. Student support		
- financial resources and accessibility	52	17
- levels of student counseling and programme advising	59	10
- impact of new information technologies on student support	57	7
- quality and standards of learning resources	55	6
- specifically identified resources for Adult special education	58	4
- leadership in co-curricular activity	53	3
- adequacy of career guidance and employment information	56	3
- microcomputer as tool in support of instruction	54	2

TABLE 5.1 (cont'd)

Issues	Issue #	# Times Identified
H. Other		
- human resource development	70	9
- impact of continued restraint	63	6
- emergence of international education	68	5
- instructors as learning managers	60	5
- role of distance education alternatives	73	5
- place of computer in college programmes	74	5
- formula versus non-formula funding	61	4
- inter-institutional cooperation	71	4
- partnership with private sector	66	4
- centralized control of colleges	67	4
- equity of formula allocations	65	3
- role of government	69	3
- value of strategic planning	72	3
- absence of block grant funding system	62	2
- alternative sources of revenue	64	2

* (For a complete statement of the issue categories see Appendix II in Round Two Questionnaire.)

broadly based "other" programme area as well. In comparing the panel sub-groups on the types of issue statements identified, Ministry officials appeared to focus on programme adequacy and flexibility whereas chief executive officers emphasized programme resources and student support. Senior instructional administrators were somewhere between the two other sub-groups.

Senior instructional administrators expressed the most concern, as measured by numbers of issue statements identified, for the academic/transfer programme area. Several college based panel members (ie., chief executive officers and senior instructional administrators) identified issues that stressed the importance of the community service programme area to the functioning of a college. Ministry officials, with one or two notable exceptions, tended not to place the same emphasis on this programme area. All three sub-groups identified the importance of adult basic education as a programme area needing attention and support.

Summary of round one

In round one of this study an interview format with twenty-four panel members was utilized to identify emerging programme issues in the British Columbia college system. A total of 481 issue statements were identified during the interviews. These issue statements were coded and sorted

into 74 issue categories under the following programme areas: academic/transfer, career/ technical, vocational, continuing education, community service, adult basic education, student support, and other. These issues were used as the basis for the round two questionnaire.

Round Two

The purpose of the second round was to have panel members rate each of the 74 issues identified in round one on two scales: importance and impact. A questionnaire format was used for this purpose. The 74 issues were listed under the eight programme areas employed in the previous round. The importance rating responses assumed a continuous distribution and were collected using a five-point scale. The impact rating responses assumed a discrete distribution. The scale used identified the three levels at which the issue was likely to have an impact, namely, institution specific, sub-group of colleges, and system-wide. Opportunity was provided for panel members to identify additional issues at the end of each cluster of programme area issues.

Discussion and Analysis

The data collected from the second round questionnaires were tabulated for each panel sub-group using frequency scores for both rating distributions. Twenty-two panel members responded within the time allowed

by the researcher. A master key was produced and this became the basis for the round three survey document (See Appendix III).

As mentioned in the previous chapter, the data for the importance ratings were further analyzed using three commonly used descriptive statistics: a measure of central tendency (mean), a measure of variation (coefficient of variation), and a measure of skewness (coefficient of skewness). These measures allowed for further comparisons among panel sub-groups and between the round two and round three responses.

An analysis of the impact ratings and the additional comments was left for the round three discussion and analysis section. In this section the direction of the analysis was focussed on the importance ratings, particularly as they could be used to identify similarities and differences among the three sub-groups of the panel. Table 5.2 provides a summary of the statistical measures for each of the sub-groups in the second round. The means provided a useful tool to differentiate among the sub-groups whereas the coefficients of variation and skewness provided an accurate picture of the nature of the distribution around those means.

In general terms there appeared to be a moderate degree of agreement among the groups as to the perceived importance of each of the issues. An examination of paired

TABLE 5.2

A Comparison of Importance Rating Statistics by Panel Sub-Group for Round Two

Issue Category	Ministry Officials (n = 8)			Chief Executive Officers (n = 6)			Senior Instructional Administrators (n = 8)		
	$\bar{\mu}$	σ	SKEW	$\bar{\mu}$	σ	SKEW	$\bar{\mu}$	σ	SKEW
Academic									
1	3.4	25.4	0.39	4.0	20.4	0.00	3.6	23.6	-0.39
2	2.6	46.4	0.75	2.2	62.0	1.34	2.5	28.3	1.06
3	2.5	34.6	0.00	2.8	31.7	0.33	2.9	32.2	-0.69
4	1.9	56.2	0.89	3.5	36.0	0.00	3.0	40.8	0.00
5	2.6	26.5	0.66	2.8	42.8	0.32	3.9	15.5	0.05
6	2.9	36.6	0.89	2.8	31.7	0.33	4.0	12.5	0.00
7	2.4	55.5	0.93	2.5	30.6	1.12	2.6	32.6	0.80
8	3.3	29.8	0.31	4.2	16.5	-0.23	4.1	25.5	-0.89
9	2.1	36.7	1.35	3.0	50.9	0.28	3.4	39.0	0.27
Career/tech.									
10	3.6	36.3	-0.93	4.5	11.1	0.00	3.5	28.6	-0.38
11	3.8	32.0	-0.38	3.5	27.4	0.00	3.5	28.6	0.38
12	3.4	20.6	-0.66	3.5	31.9	-0.36	2.8	39.6	-0.07
13	3.4	25.4	0.39	3.3	28.3	-0.71	2.8	35.2	-0.31
14	2.5	34.6	1.15	4.0	14.4	0.00	3.4	25.4	0.39
15	3.6	19.2	0.66	3.8	17.9	0.23	3.9	27.2	-0.39
16	4.4	11.1	0.52	4.8	7.7	-1.79	4.5	15.7	-1.06
17	3.4	20.6	-0.66	3.2	28.3	-0.33	3.0	23.6	0.00
18	3.0	28.9	0.00	3.3	22.4	-0.63	2.8	39.6	-0.07
19	4.5	11.1	0.00	4.2	16.5	-0.23	4.4	15.9	-0.66
20	3.3	33.5	0.07	4.7	10.1	-0.71	3.4	22.1	-0.82
21	3.4	20.6	-0.66	3.7	30.2	-0.05	3.4	14.3	0.52
22	3.9	20.1	0.22	3.5	27.4	0.00	3.9	20.1	-1.35
23	4.6	10.5	-0.52	4.3	17.2	-0.63	4.5	11.1	0.0

TABLE 5.2 (cont'd)

Issue Category	Ministry Officials (n = 8)			Chief Executive Officers (n = 6)			Senior Instructional Administrators (n = 8)		
	$\bar{\mu}$	σ	SKEW	$\bar{\mu}$	σ	SKEW	$\bar{\mu}$	σ	SKEW
Vocational									
24	4.0	30.6	-0.82	5.0	0.0	0.00	4.4	11.1	0.52
25	3.6	27.4	0.04	5.0	0.0	0.00	4.8	9.1	-1.15
26	4.1	14.5	-0.05	4.7	16.0	-1.80	4.0	12.5	0.00
27	3.6	27.4	0.04	3.8	27.8	-0.49	4.3	19.5	-0.49
28	3.9	23.9	-0.69	4.0	28.9	-0.65	4.0	17.7	0.00
29	1.8	37.8	0.32	2.8	37.7	1.16	3.0	40.8	-0.82
30	2.6	53.7	0.42	3.3	41.2	0.16	2.4	36.1	0.39
31	3.8	22.1	-0.82	3.7	20.3	0.63	3.8	22.1	0.49
32	4.3	22.8	-1.34	4.5	17.0	-1.12	3.8	25.8	-0.31
33	4.0	25.0	0.00	3.7	30.2	-0.05	4.1	8.0	2.27
Continuing Ed.									
34	3.4	29.4	-0.04	4.3	17.2	-0.63	3.9	20.1	-1.35
35	3.1	33.7	0.39	3.5	27.4	0.00	4.3	22.8	-1.34
36	4.0	25.0	-0.75	3.8	27.8	-0.49	3.8	32.0	-1.25
37	3.8	29.1	-0.65	4.2	35.1	-1.57	4.5	11.1	0.00
38	4.3	10.2	1.15	3.7	20.3	0.63	3.9	20.1	0.22
39	4.0	21.7	0.00	4.2	16.5	-0.23	3.8	25.8	-0.31
40	4.0	21.7	0.00	3.3	33.2	0.05	3.9	23.9	-0.69

TABLE 5.2 (cont'd)

Issue Category	Ministry (n = 8) Officials			Chief Executive (n = 6) Officers			Senior Instructional (n = 8) Administrators		
	$\bar{\mu}$	σ	SKEW	$\bar{\mu}$	σ	SKEW	$\bar{\mu}$	σ	SKEW
Comm. service									
41	3.1	49.2	-0.21	4.3	17.2	-0.63	3.1	37.3	-0.72
42	3.6	30.6	-0.32	4.2	21.5	-0.33	4.3	15.6	-0.32
43	3.3	36.9	0.38	2.7	28.0	0.63	2.3	43.0	0.31
44	3.5	28.6	-0.38	2.5	44.7	0.36	2.4	29.3	-0.66
45	4.0	21.7	0.00	4.0	14.4	0.00	3.9	20.1	0.22
A.B.E.									
46	3.8	22.1	0.49	3.3	28.3	0.49	3.1	40.6	-0.24
47	3.6	27.4	-0.73	3.0	38.5	0.65	3.0	33.3	-0.75
48	3.8	22.1	-0.82	3.3	37.4	0.38	3.1	46.5	-0.22
49	3.3	33.5	0.65	3.5	14.3	0.00	3.0	37.3	-0.54
50	4.1	18.9	-0.22	3.3	28.3	0.49	3.8	17.6	0.32
51	4.1	18.9	-0.22	3.8	27.8	-0.49	4.5	15.7	-1.06
Student supp.									
52	4.1	25.5	-0.89	3.8	31.7	-0.24	4.8	9.1	-1.15
53	2.1	36.7	-0.22	2.3	40.4	0.49	3.0	40.8	0.00
54	4.3	15.6	-0.32	4.3	34.4	-1.79	3.9	23.9	-0.69
55	3.3	29.8	0.31	3.7	37.5	-0.93	3.8	32.0	-0.38
56	3.4	46.7	-0.44	3.8	35.1	-1.34	2.8	35.2	-0.31
57	3.9	15.5	0.05	3.8	27.8	-0.49	4.1	18.9	-0.22
58	4.1	14.5	-0.05	3.7	20.3	-0.63	3.5	28.6	-1.86
59	3.5	28.6	0.38	3.2	33.7	0.49	3.5	24.7	0.00

TABLE 5.2 (cont'd)

Issue Category	Ministry Officials (n = 8)			Chief Executive Officers (n = 6)			Senior Instructional Administrators (n = 8)		
	$\bar{\mu}$	σ	SKEW	$\bar{\mu}$	σ	SKEW	$\bar{\mu}$	σ	SKEW
Other									
60	4.5	11.1	0.00	3.5	27.4	0.00	4.0	21.7	0.00
61	3.8	25.8	-0.31	4.5	11.1	0.00	4.4	15.9	-0.66
62	2.5	40.0	1.88	3.0	38.5	0.65	4.1	22.5	-1.19
63	4.0	12.5	0.00	4.3	25.5	-1.43	4.6	10.5	-0.52
64	3.3	20.4	-0.32	4.3	17.2	-0.63	4.0	17.7	0.00
65	2.9	36.6	0.25	3.3	37.4	0.35	4.1	25.5	-0.89
66	4.1	14.5	-0.05	3.5	27.4	0.00	3.8	17.6	0.32
67	2.5	40.0	1.88	4.3	25.5	-1.43	4.1	14.5	-0.05
68	2.8	35.2	-0.31	4.2	21.5	-0.33	3.4	25.4	0.39
69	3.1	43.6	0.07	4.2	25.5	-0.33	3.1	19.2	-0.05
70	3.9	27.2	-0.39	3.5	27.4	0.00	4.6	10.5	-0.52
71	3.8	25.8	-0.31	3.5	27.4	0.00	3.6	23.6	-0.39
72	3.8	17.6	0.32	2.8	37.7	1.16	3.1	29.7	0.69
73	3.8	22.1	0.49	3.3	33.2	0.05	3.4	20.6	-0.66
74	4.0	21.7	0.00	4.0	20.4	0.00	4.1	14.5	-0.05

rank-order correlations revealed that the greatest agreement was between chief executive officers (CEOs) and senior instructional administrators (SIAs) (r = 0.60), whereas the least agreement was between chief executive officers and Ministry officials (MINs) (r = 0.47). A comparison between senior instructional administrators and Ministry officials resulted in a correlation that was similar to that between CEOs and MINs (r = 0.50).

A more detailed examination of the pattern of agreement within each of the programme areas, however, revealed several interesting variations worthy of further comment. The remaining paragraphs in this section highlight some of the more noteworthy features of those patterns. The discussion is organized under the programme areas employed in this study.

Academic/transfer. Perhaps the most obvious feature of the importance ratings for the Ministry officials in the academic/transfer area was that the mean scores were uniformly low. Only two of the nine mean scores were greater than 3.0 implying that, for the Ministry officials as a group, the issues in this programme area were not perceived to be of high importance within the planning period under consideration. The lowest mean score was 1.9. The mean scores for the chief executive officers were also quite low with the exception of two scores which were 4.0 and above. The viability of second-year academic

programmes (1) and the impact of pressure for increased productivity and workloads on faculty morale (8) appeared to be of major concern to the CEOs. Similarly, the senior instructional administrators judged increased workloads and productivity (8) to be a significant issue, but SIAs did not rate the viability of the second-year academic programme (1) as highly as the CEOs.

SIAs rated the University of British Columbia's decision to limit transfer students from colleges (5) and the Ministry's renewed interest in identifying measures of the outcomes of academic programmes (6) as issues of high importance. The other two sub-groups in the panel did not share this perception.

Overall there was moderate agreement among the three sub-groups on the issues in the academic/transfer programme area. The paired rank-order comparisons yielded correlation coefficients ranging from the least agreement between MINs and CEOs ($r = 0.49$) and the highest agreement between CEOs and SIAs ($r = 0.58$).

Career/technical. Ministry officials identified three issues in the career/technical programme area as being of high importance. The three issues were equipment maintenance and replacement (16); the pressure for programme substitution (19); and faculty renewal, retraining, and curricular revision (23). These issues were also identified by the other two sub-groups as being

of high importance.

In addition to the issues identified above, chief executive officers identified three other issues from within the career/technical programme area as being of high importance. These included the influence of the computer on curriculum in career preparation programmes (10); the effect of creating "centres of excellence" within the college system on the comprehensive nature of colleges (14); and the effect of low employment markets on programmes (20).

An examination of paired rank-order correlation coefficients in the career/technical programme area revealed the highest level of agreement between Ministry officials and senior instructional administrators (r = 0.80). The remaining comparisons included CEOs with SIAs (r = 0.65) and MINs with CEOs (r =0.39).

Vocational. The majority of the issue mean scores in the vocational programme area were fairly high. Paired rank-order comparisons were all fairly high: MINs with CEOs (r = 0.74), MINs with SIAs (r = 0.70), and CEOs with SIAs (r = 0.75). Ministry officials rated four out of ten issue categories with a mean score of 4.0 or higher. Chief executive officers rated five issues 4.0 or higher, and senior instructional administrators rated six at 4.0 or above.

Two of the four issues rated of high importance by

Ministry officials were also rated in a similar fashion by CEOs and SIAs. These issues were the shift towards employer-based training as reflected by the Canada Job Strategy initiative (24), and the adequacy of the apprenticeship system as a model of trades training (26).

The other two issues rated highly by Ministry officials were the effect of low employer demand on certain trades programmes (32), and the challenges presented by competency-based training (33). CEOs also rated the first of these two issues (32) of high importance whereas SIAs rated the second issue (33) with a high rating. In addition, both CEOs and SIAs rated the reduction of Federal training purchases (25), and the rigidity of programme delivery formats (28) of high importance. Senior instructional administrators rated the need to incorporate more generic level skills in trades training (27) of high importance as well.

Continuing education. Ministry officials rated four of the seven issues in the continuing education programme area 4.0 or higher. These issues included quality control for short-term programmes (36); retraining the un- and under-employed (38); competition between colleges and private sector alternatives (39); and the growing demand for short-term occupational upgrading (40). Chief executive officers rated three issues of high importance: the emerging importance of part-time and occupational

upgrading (34); the importance of maintaining a viable administrative structure with responsibilities in this programme area (37); and the competition factor with private sector educational alternatives (39). Senior instructional administrators also identified the importance of maintaining viable infrastructures (37) of high importance as well as the unequal treatment of cost recovery versus subsidized programmes (35).

An examination of the paired rank-ordered comparisons provided little evidence of any agreement among the three sub-groups of the panel. Two of the three pairs revealed a very slight relationship and the third, MINs with SIA ($r = -0.47$) demonstrated a moderately negative relationship.

Community services. All three sub-groups identified the role of colleges in local economic development (45) as a fairly high importance issue category. In addition, chief executive officers identified the differences between non-metropolitan and metropolitan colleges (41), and the maintenance of store front operations and small regional centres (42) as high importance issues. Senior instructional administrators agreed with CEOs on the second of these two issues (42), but not the first.

The paired rank-order comparison between CEOs and SIAs revealed strong agreement ($r = 0.83$). The relationship between the MINs with CEOs was very weak ($r = 0.14$), and moderate for MINs with SIAs ($r = 0.56$).

Adult basic education. Two of the six issues in the adult basic education programme area were rated of high importance by Ministry officials. These two included the instructional challenges created by high levels of adult illiteracy (50), and the need to determine the province's commitment to adult basic education (51). The senior instructional administrators agreed with Ministry officials on the need for provincial commitment (51) but did not rate the instructional challenges of illiteracy quite as highly. Chief executive officers, as a group, did not rate any of the issues in the adult basic education programme area 4.0 or over, although a number of them rated some of the issues quite highly. Two of the rank-order comparisons were moderately high in strength, [MINs with SIAs ($r = 0.78$) and CEOs with SIAs ($r = 0.72$)], while the third was very weak, [MINs with CEOs ($r = 0.29$)].

Student support. Ministry officials rated three of the eight issues in the student support programme area as highly important. The limitations of financial resources for students as it might serve to undermine access to college programmes (52), the microcomputer as a learning aide (54), and need for specifically targeted funds in support of adult special education (58) were identified by the Ministry sub-group. The chief executive officers agreed with the Ministry sub-group on the importance of the microcomputers (54), whereas the senior instructional

administrators agreed with the Ministry officials on the importance of the financial resources (52) issue category.

The strongest relationship among the rank-order pairs was that between MINs and CEOs (r = 0.89). The remaining two rank-order pairs were only moderate in strength.

Other. The pattern of responses in this last programme area was quite varied. A comparison of the paired rank-order correlations revealed a very weak level of agreement for all three pairs. Of the twelve issues that were identified by at least one sub-group as of high importance, only two were shared among all three sub-groups. These two were the impact of continued restraint on college operations (63) and the place of the computer in all college programmes (74). Ministry officials identified two other issues as of high importance; instructors as learning managers (60) and the new opportunities presented by colleges being encouraged to develop partnerships with the private sector (66).

In addition to the two issues already mentioned above (63 and 74), chief executive officers identified five other issues: the problems related to non-formula funding (61); the challenge of finding new sources of revenue (64); the centralized control of colleges (67); the emergence of international education (68); and the respective role of various levels of government in the postsecondary sector (69).

Senior instructional administrators identified nine issues as having high importance. They included a number of the issues already mentioned (60, 61, 63, 64, 67, and 74) and added the absence of block grant funding (62); equity in the formula allocations (65); and the challenges presented by the growing need for human resource development in the college system (70).

Summary of Round Two

Round two employed a survey questionnaire format. Panel members were asked to rate the 74 issue categories identified in round one on two dimensions: importance and impact. Twenty-two panel members responded within the time allotted. A frequency count was computed for both the importance and impact ratings. The master key of these ratings was compiled and was used as the basis for round three.

Descriptive statistical measures were computed for each issue for each of the three sub-groups that made up the Delphi panel. The analysis phase focussed on similarities and differences among these three sub-groups.

Round Three

The purpose of the third round was to offer panel members an opportunity to alter their round two ratings. Individualized questionnaires were prepared for each panel member. The questionnaires included a master key of the

frequency counts for the total panel in the previous rounds. The individual panel member's previous ratings were also indicated on the questionnaire. Panel members were invited to reconsider their responses and to make adjustments as required.

Frequency counts were tabulated for both rating scales in the third round. In addition, comparable descriptive statistics to those employed in the second round were used to further analyze the importance ratings. This analysis allowed for three specific objectives to be accomplished in the third round: an examination of the impact ratings; a comparison of the round two statistical measures with those obtained in round three; and an identification of the highly ranked issues for use in round four. Additional comments received on the round two and round three questionnaires are discussed at the end of the round three discussion and analysis section.

Discussion and Analysis

The data collected from the round three questionnaires were tabulated using frequency counts for the impact ratings and descriptive statistics for the importance ratings. Only ten panel members returned their round three questionnaires, nine of these included adjustments to at least one or more issue ratings. Panel members that did not return their questionnaires were contacted by the

researcher. All those contacted indicated their desire to stay with the ratings they submitted in the second round.

Analysis of impact ratings. Table 5.3 provides a matrix comparison of importance rating means with impact rating frequencies. The frequency categories on the impact scale were determined by employing a simple decision rule. In order to be listed in a specific impact category, fifty percent or more of the total number of panel members (≥11) in the study at this time must have clearly indicated the impact to be at that level. Otherwise the impact was determined to be appropriately listed in the "not specified" category.

Sixty-one of the seventy-four issues were determined to have a system-wide impact. A further six issues were listed in the sub-group of colleges category, implying that they were issues that pertained to particular colleges and not others. Most of the issues that fell into this group were concerned with either metropolitan or non-metropolitan colleges. The remaining issues were all listed in the "not specified" category. None of the issues identified in the study to this point were considered to be specific to any particular college in the system.

For ease of comparison the importance mean scores were divided into three groups: low (below 3.0), moderate (3.0 to 3.9), and high (4.0 or above). The issues listed in

TABLE 5.3

A Matrix Comparison of Importance Ratings Means With Impact Ratings for Panel Members in Round Three

Importance Impact	Low < 3.0	Moderate 3.0 to 3.9	High ≥ 4.0
System-wide ≥ 50%	4	36	21
Sub-group of colleges ≥ 50%	0	5	1
Institution Specific ≥ 50%	0	0	0
Not Specified	6	1	0

this high importance grouping were chosen as the basis of the round four interview guide. This group is discussed in greater detail in the paragraphs below.

The issues listed in the system-wide impact category were distributed among all three of the importance groups with the majority being of moderate importance or higher. The issues in the "not specified" category tended to be of low importance. The issues in the subgroup of colleges category were all in the moderate grouping, with the exception of one issue that was listed in the high importance group.

Comparison of round two with round three. Since less than half of the panel members opted to adjust their round two ratings, it was reasonable to expect that the relationship between the round two and round three importance rating mean scores would be very strong ($r = 0.98$). Nevertheless, a closer examination of the trends of change in both the mean scores and the coefficients of variation provided information that was useful in the interpretation of the comparisons (Table 5.4).

Twenty-four of the thirty-one mean scores that were altered between round two and round three showed an increase in value. On the other hand, thirty-eight of the forty-five coefficients of variation that altered between the two rounds showed a decrease. This latter result was consistent with the literature on the Delphi process

TABLE 5.4

A comparison of Importance Rating Statistics
for the Total Panel Between Round Two and Round Three

Issue Category	Mean ($\bar{\mu}$)			Coefficient of Variation (σ)		
	Round Two	Round Three	+/-	Round Two	Round Three	+/-
Academic/ transfer						
1	3.6	3.7	+	24.2	22.3	-
2	2.5	2.5		45.5	45.5	
3	2.7	2.8	+	33.5	33.2	-
4	2.7	2.8	+	49.7	47.4	-
5	3.1	3.2	+	32.3	30.9	-
6	3.3	3.3		30.8	30.7	-
7	2.5	2.5		41.3	41.3	
8	3.8	3.6	-	26.9	30.5	+
9	2.8	2.8		47.4	47.4	
Career/ technical						
10	3.8	4.0	+	29.2	23.8	-
11	3.6	3.6		29.9	28.2	-
12	3.2	3.2		32.3	32.3	
13	3.1	3.1		30.8	30.8	
14	3.2	3.2		30.9	30.9	
15	3.8	3.8		22.5	22.5	
16	4.5	4.5		12.8	12.8	
17	3.2	3.4	+	24.1	21.1	-
18	3.0	3.0		31.8	31.8	
19	4.4	4.4		14.7	14.7	
20	3.8	3.9	+	26.9	26.2	-
21	3.5	3.5		22.6	24.0	+
22	3.8	3.8		22.5	22.5	
23	4.5	4.6	+	13.0	12.6	-

TABLE 5.4 (cont'd)

Issue Category	Mean ($\bar{\mu}$)			Coefficient of Variation (σ)		
	Round Two	Round Three	+/-	Round Two	Round Three	+/-
Vocational						
24	4.4	4.4		20.1	20.2	+
25	4.4	4.3	-	20.1	21.4	+
26	4.2	4.2		15.8	15.8	
27	3.9	3.9		25.5	25.5	
28	3.9	3.9		23.5	23.5	
29	2.5	2.4	-	46.3	45.2	-
30	2.7	2.6	-	47.1	46.5	-
31	3.7	3.9	+	21.7	22.3	+
32	4.1	4.2	+	23.4	21.2	-
33	4.0	4.1	+	22.2	17.9	-
Continuing Education						
34	3.8	3.9	+	24.5	25.0	+
35	3.6	3.6		30.5	30.5	
36	3.9	3.9		28.5	27.7	-
37	4.1	4.2	+	26.6	23.5	-
38	4.0	4.0		17.8	16.9	-
39	4.0	4.0		22.2	21.3	-
40	3.8	3.9		26.4	23.0	-

TABLE 5.4 (cont'd)

Issue Category	Mean ($\bar{\mu}$)			Coefficient of Variation (δ)		
	Round Two	Round Three	+/-	Round Two	Round Three	+/-
Community service						
41	3.5	3.5		38.8	38.8	
42	4.0	4.0		23.8	22.9	-
43	2.7	2.7		40.1	40.1	
44	2.8	2.8		38.0	38.0	
45	4.0	3.9	-	19.4	18.7	-
Adult basic education						
46	3.4	3.4		31.5	31.5	
47	3.2	3.2		33.6	33.6	
48	3.4	3.4		36.1	36.1	
49	3.2	3.2		30.9	30.9	
50	3.8	3.8		22.5	21.8	-
51	4.2	4.2		21.2	21.2	
Student support						
52	4.3	4.4	+	23.6	22.4	-
53	2.5	2.5		43.1	38.3	-
54	4.1	4.2	+	25.6	24.6	-
55	3.5	3.5		33.7	33.7	
56	3.3	3.5	+	42.4	40.7	-
57	4.0	4.0		20.8	19.9	-
58	3.8	3.8		22.5	21.8	-
59	3.4	3.5	+	28.9	27.2	-

TABLE 5.4 (cont'd)

Issue Category	Mean ($\bar{\mu}$)			Coefficient of Variation (δ)		
	Round Two	Round Three	+/-	Round Two	Round Three	+/-
Other						
60	4.0	4.1	+	21.7	19.4	-
61	4.2	4.2		19.9	18.9	-
62	3.2	3.1	-	38.4	36.4	-
63	4.3	4.3		17.6	17.6	
64	3.8	3.8		21.8	21.8	
65	3.5	3.5		35.7	35.7	
66	3.8	3.8		20.3	20.3	
67	3.6	3.6		34.3	34.3	
68	3.7	3.3		31.7	30.7	-
69	3.4	3.5	+	32.7	30.8	-
70	4.0	4.1	+	24.1	24.3	+
71	3.6	3.7	+	25.6	25.1	-
72	3.2	3.3	+	29.4	27.8	-
73	3.5	3.5		25.5	23.6	-
74	4.0	4.1	+	19.0	16.3	-

(Linstone and Turoff, 1975), which indicated that the Delphi technique can be expected to lead towards consensus building. The general trend toward a reduction in the coefficients of variation, however slight, meant that the rating scores were less divergent in round three. This interpretation received additional support from an examination of the paired rank-order comparisons for the panel sub-groups in round three: [MINs with CEOs (r = 0.52), CEOs with SIAs (r = 0.65, and MINs with SIAs (r = 0.54)]. All three comparisons were up slightly from those computed for the same sub-groups in round two.

Identification of high importance issues. As indicated in the paragraphs above, twenty-two issues were rated of high importance in round three (Table 5.5). They formed the basis for the development of the round four interview guidelines (See Appendix IV).

The twenty-two issues were organized into seven clusters, each with a common theme. The themes included: computers, student access, employment markets, faculty retraining and renewal, base funding, technological change, and Federal priorities. There was a fair degree of overlap among the themes as many of the issues fit into more than one place. The issues were assigned to one or more issue clusters as appropriate. In each case the issue was used for illustrative purposes only. The panel members were asked for strategies to address the overall issue cluster

TABLE 5.5

Issues for Use in Round Four Interviews

Issue #	
10	The influence of the computer may significantly alter the curriculum in many career/technical programmes.
16	Equipment maintenance and replacement and the pace of change in high technology in the workplace may create major challenges for colleges, particularly in trades and career/technology programmes.
19	New types of career programmes required in response to changing economic condition, and lack of additional funds to start new programmes, may increase pressure for programme substitution.
23	Rapid changes in technology may create an increasing need for faculty renewal and retraining and for curricular revision in order for career/technical programmes to remain current.
24	The shift towards employer-based training as reflected in the Canadian Jobs Strategy initiative may lead to a significant reorientation of the delivery of trades training.
25	The federal decision to reduce CEIC seat purchases in vocational programmes may seriously alter the ongoing financial support for trades programmes.
26	The apprenticeship system as a model of trades training may no longer function adequately to prepare young people for careers in the trades fields.
32	Continued low levels of employer demand in certain trades fields may influence student demand in associated college-based trades programmes.

TABLE 5.5 (cont'd)

Issue #	
33	Competency-based training in the trades may continue to present a challenge for colleges in terms of staff training, curriculum development, and capital resource utilization.
37	In order to be able to respond to industry specific requests and job strategy initiatives, increasing attention may need to be given to the importance of maintaining a viable infrastructure (core programmes, administration, support services) in the colleges.
38	Retraining of the un- and under-employed may become an increasingly important challenge for the college system.
39	Colleges may need to become even more creative and innovative in the design and delivery of part-time vocational and occupational upgrading in order to compete successfully with private sector educational alternatives.
42	As financial resources become more limited, it may be increasingly more difficult for colleges to maintain store front operations and regional centres in smaller communities.
51	There may be a need to reconfirm the province's continuing commitment to Adult Basic Education in light of the planned federal withdrawal of support for this level of programming.
52	Limitations of financial resources for students may seriously undermine the accessibility to post-secondary education for increasingly larger numbers of students.
54	The microcomputer may become a necessary tool in support of instruction throughout the college.
57	The advent of new information technologies may seriously alter the way libraries and other support services are used.

TABLE 5.5 (cont'd)

Issue #	
60	The impact of new informational and instructional technologies may alter the way programmes are operated. Instructors may tend to become more like learning managers and tutors than teachers.
61	The base level allocation of funds to support college programmes may continue to decrease relative to the special funds allocated to specifically identified projects and activities.
63	Continued restraint in funding college operations may have a negative impact on a college's ability to operate effective programmes and services.
70	Human resource development may become an increasing area of concern as faculty and staff grow older and increasingly more remote from their students' point of view.
74	There may be an increasing need to recognize and plan for the place of the computer within all college programme areas.

rather than to respond to the individual issues.

Additional comments. Several comments were collected over the two rounds of questionnaires. Generally, the comments helped to clarify particular rating choices, or in some cases to suggest further elaborations on the issue listed in the questionnaire. One panel member reported having difficulty with the assumptions underlying one of the issues as stated. Another used the questionnaire to identify current problems in the college system.

The comments listed below are representative of those received and they are presented under the programme area headings used in the questionnaire.

1. Academic/transfer

   At the present time academic programmes are receiving the highest priority - UT and ABE.

   Issue #8 would be judged on a political faculty polemical basis rather than a rational one.

2. Career/technical

   I question the assumption that all employers want specific job-related skills.

   #22 - if appropriate employment and remuneration is not available

   The issue in #15 is whether career/tech programs will continue to be delivered on the historical "academic" year or not.

   Colleges must be nurtured and allowed to grow - the centres of excellence might be construed as a specific college having an "exclusive" on a particular program.

3. Vocational

   The colleges must get away from reliance on CEIC and MOL funding to ensure programme continuation. If training is socially desired and economically demanded then it should be in the base.

4. Continuing education

   Educational programming must be developed that will enable large numbers of people to live creatively while unemployed and underemployed.

   #40 can be rephrased to ask whether the demand for full time training and transfer training may tend to increase.

   The phrases full-time/part-time, day-time/night-time should not be part of the college lexicon. Such administrative divisions are doing nothing

but featuring the worst of many top-heavy bureaucracies in the colleges! Those divisions are counterproductive and do nothing to help and much to hinder student success.

5. Community service

The colleges should be repeatedly re-directed to their mandates. In local economic development we have C.E.I.C., M. of L., F.B.D.B., Chamber of Commerce, Min. of Tourism etc., etc., etc. Why should the colleges dilute themselves even further when there are a plethora of agencies concerned with this. Our mandate is education, not economic development. However, as in all things education might contribute to a solution.

6. Adult basic education

This is the group that particularly needs $'s to help them achieve their goals.

#46 the opposite may be true - most overseas countries cannot afford to send students abroad for ESL - we may have to go there to assist in creating their schools

7. Student support

More and more the media/AV dept. will be fulfilling many of the infrastructure services presently offered by libraries. I don't believe libraries can keep up with the modern speed of technological change in career/tech and vocational programmes. More and more they will be the private backwaters of academic/UT faculty. I look forward to telidon and each citizen and student via their computers and modem having their own entree into every library in North America.

8. Other

The impact of the new C.I.E.A. union with its financial support for faculty in bargaining disputes will substantially alter the balance of power. Provincial bargaining will eventually emerge resulting in more uniform collective agreements and subsequent less diversity in how colleges operate and less diversity in what services colleges offer their communities.

Summary of Round Three

In round three panel members were given an opportunity to confirm or adjust their importance and impact ratings from the second round. An individualized questionnaire was made for each member of the panel which showed the summarized frequency tabulations for each issue and the panel members individual responses for the previous round. Panel members were invited to make any alterations they thought might be appropriate.

In the discussion and analysis section of round three the impact ratings were examined, a comparison between round two and round three importance ratings was made, highly rated issues for use in round four were identified, and additional comments received with the questionnaires were summarized.

Round Four

The purpose of the fourth round was to suggest strategies college planners and managers might employ to address the high importance issues identified in round three. This final round of the study was organized in an interview format. The twenty-two issues identified in round three were organized into seven issue clusters to facilitate the interview process. An interview question was developed for each of the clusters. All but one of the high importance issues were considered to have an impact

across the entire college system. Nevertheless, the researcher felt it was important that the implications of the issue clusters be considered by institution level policy makers as well as those at the system level. Consequently panel members were asked to consider the questions at both levels. Panel members were also asked to consider and comment on the policy implications, if any, of the strategies they identified.

Discussion and Analysis

The data collected in the round four interviews were analyzed using the procedures outlined in Chapter IV. Table 5.6 presents frequency tabulations for the number of responses received from each of the three panel sub-groups for each of the seven issue clusters.

On first examination of Table 5.6 it may appear that the order of the issue clusters was also the order of importance for those clusters. The researcher could not rule out an alternative explanation of interview fatigue, however, so no claim for the order of importance is made.

All panel sub-groups offered a number of responses for each of the issue clusters. Overall the chief executive officers provided the most responses and the Ministry officials provided the fewest. Senior instructional administrators provided a fairly consistent pattern of

TABLE 5.6

Number of Responses Received During the Round Four Interviews by Issue Cluster and Panel Member Sub-Group

Issue Cluster	Ministry Officials	Chief Executive Officers	Senior Instructional Administrators	Total
Computers	32	30	34	96
Student Access	23	30	28	81
Employment Markets	24	28	25	77
Faculty Retraining & Renewal	24	22	23	69
Base Funding	9	26	18	53
Technological Change	14	16	20	50
Federal Priorities	9	13	12	34
Totals	135	165	160	460

responses in relation to the other two sub-groups across all seven issue clusters.

The variations in the number of responses across the three sub-groups proved of interest to the researcher. Chief executive officers appeared to have the most to say about student access and changing employment markets. They also provided the largest number of responses to the two funding related issue clusters, namely, base funding and federal priorities. These observations may be accounted for in that sensitivity to market demand and the acquisition of resources in support of the institution are primary concerns of the chief executive officer in the college setting. Senior instructional administrators, for their part, provided the largest number of responses for the two issue clusters related to the new information technology. Ministry officials, on the other hand, identified faculty retraining and renewal as the focus for a number of their responses. The lower number of responses from the ministry officials sub-group for the two funding related clusters was somewhat disappointing to the researcher. Perhaps their reluctance to comment could be explained, in part, by the political sensitivity of their positions.

As part of the analysis in this round the individual responses under each of the issue clusters were carefully reviewed. Overlapping and closely associated strategies

were eliminated. The resulting lists of strategies for each issue cluster that were compiled from the round four interviews are presented in Table 5.7. These strategies are discussed in detail in Chapter VI.

Summary of Round Four

In round four interviews were held with all panel members participating in the study. Panel members received a guide in advance which contained specific questions for them to respond to during the interview. The guide contained seven major issue clusters under which the twenty-two issues identified during the previous round were organized and listed. Panel members were asked to identify strategies to address the issue clusters and to reflect on the potential policy implications of their suggestions. These strategies, along with other supplementary materials, provided the basis for the discussion in Chapter VI.

Summary

This chapter provided a description and analysis of the data collected in a four round Delphi study. Each round was presented and discussed in a separate section of the chapter. The sections contain a statement of purpose for the round, a brief description of the instrument used to collect data, and a description and analysis of the data collected during the round.

TABLE 5.7

Rank-ordered Strategies for Each Issue Cluster
Used in Round Four Interviews

I. Issue Cluster: Computers

Rank	Strategy Category	Frequency	Percentage
1	promote computer literacy in colleges	12	12.5
2	strategic planning address computer applications in instruction	11	11.5
3	encourage experimentation with computers	8	8.3
5	monitor developments in computer field	6	6.3
5	designated funding for computer acquisition	6	6.3
5	articulation among colleges related to computer applications	6	6.3
8	coordinated purchasing power	4	4.2
8	provision of professional development at system level	4	4.2
8	electronic network to create system integration	4	4.2
12.5	ensure expertise at each college to act as innovators, mentors, etc.	3	3.1
12.5	explore computer-based, computer-aided instruction	3	3.1
12.5	encourage inter-institutional collaboration and cooperation	3	3.1
12.5	examine facility implications of computer access	3	3.1
12.5	ensure system compatibility	3	3.1
12.5	encourage networking of work stations within a college	3	3.1
18.5	instructors as learning managers	2	2.1
18.5	centralized development of specialized computer applications	2	2.1
18.5	alternate sources of funding for microcomputer acquisition	2	2.1
18.5	computers enhance student access	2	2.1
18.5	inventory of current uses of computers	2	2.1
18.5	computing technology introduced in a non-threatening way	2	2.1
24	facilitate acquisition of computers for students and faculty	1	1.0
24	introductory computing courses more sophisticated	1	1.0
24	Ministry proactive in acquiring software licenses	1	1.0
24	establishing electronic publishing network	1	1.0
24	college information services in one administrative unit	1	1.0
	Totals	96	100.0

TABLE 5.7 (cont'd)

II. Issue Cluster: Student Access

Rank	Strategy Category	Frequency	Percentage
1	need mandate for college-based programming clearly delineated	7	8.6
2	additional resources needed for student support	6	7.4
4.5	promotion of distance education alternatives	5	6.2
4.5	cooperative ventures with other colleges/school districts	5	6.2
4.5	examine impact of fee structures on attendance	5	6.2
4.5	alternate forms of student assistance to complement loans	5	6.2
9.5	maintain high programme standards	4	4.9
9.5	encourage participation of non-tradition students	4	4.9
9.5	explore alternate means of programme delivery	4	4.9
9.5	ensure maximum timetable flexibility	4	4.9
9.5	offer selected credit courses on a cost recovery basis	4	4.9
9.5	commitment to literacy and basic education	4	4.9
13	parents/students need to plan ahead for college	3	3.7
16	college programmes ought to emphasize generic skill training	2	2.5
16	establish foundations for student assistance	2	2.5
16	computers enhance programme access	2	2.5
16	increase awareness of long-term benefits of education	2	2.5
16	improve assessment and intake to ensure success	2	2.5
24	programmes could be laddered to promote access	1	1.2
24	explore credit-banking concept	1	1.2
24	consider incentives to improve student access	1	1.2
24	review criteria of federal programmes	1	1.2
24	review support systems for unemployed individuals	1	1.2
24	class sizes might be increased	1	1.2
24	ensure maintenance of regional centres	1	1.2
24	integrated provincial application and wait lists systems	1	1.2
24	increase use of volunteer tutoring in programmes	1	1.2
24	institute quota system in certain programmes	1	1.2
24	seek out alternate sources of operating funds	1	1.2
	Totals	81	100.0

TABLE 5.7 (cont'd)

III. Issue Cluster: Employment Markets

Rank	Strategy Category	Frequency	Percentage
1	emphasis should be on generic skill training	13	16.9
2	willingness to substitute programmes as need requires	10	13.0
3.5	seek opportunities to provide short course offerings	7	9.1
3.5	modularize career/technical curriculum	7	9.1
5.5	system effort to monitor employment trends	5	6.6
5.5	special administrative units for short-term programming	5	6.5
7.5	resources for flexible response to short-term demand	4	5.2
7.5	effective use of programme advisory committees	4	5.2
9.5	promote flexible work assignments and facility use	3	4.0
9.5	career preparation programmes on co-op education model	3	4.0
12.5	monitor graduate employability	2	2.6
12.5	highly specific skill training under contract to industry	2	2.6
12.5	integration of apprenticeship training with postsecondary system	2	2.6
12.5	programmes sensitive to student and employer needs	2	2.6
18.5	monitor quality of short-term training	1	1.3
18.5	emphasis on entrepreneurial training	1	1.3
18.5	long-term budgeting to facilitate planning	1	1.3
18.5	flexible timetable arrangements	1	1.3
18.5	paid skill development leave for business and industry	1	1.3
18.5	special funds for experimental programme initiatives	1	1.3
18.5	programme development and approval process streamlined	1	1.3
18.5	clearinghouse concept for educational training services	1	1.3
	Totals	77	100.0

TABLE 5.7 (cont'd)

IV. Issue Cluster: Faculty Retraining and Renewal

Rank	Strategy Category	Frequency	Percentage
1	more resources for P.D. planning and initiatives	10	14.5
2.5	utilize professional development resources more effectively	9	13.0
2.5	strategic planning for professional development needs	9	13.0
4	emphasis on in-house instruction-related initiatives	6	8.7
6.5	key resource people at system level	4	5.8
6.5	industrial and educational leaves promoted	4	5.8
6.5	new definitions of instructor's role	4	5.8
6.5	instructor training and/or certification requirement	4	5.8
12	cooperative arrangements to promote human resource development	2	2.9
12	promote programme similarity to allow for instructor mobility	2	2.9
12	incentives to facilitate early retirement	2	2.9
12	creative use of part-time short-term employment	2	2.9
12	incentives to promote active faculty involvement in P.D.	2	2.9
12	emphasis on teaching skills in hiring of faculty	2	2.9
12	Ministry to adopt non-directive, facilitative role	2	2.9
18	programme service measures change to suit instructional settings	1	1.5
18	system level coordination of vocational curriculum	1	1.5
18	curriculum designed to allow for rapid change	1	1.5
18	inform decision-makers of human resource development needs	1	1.5
18	permit job-sharing and job-swapping to promote renewal	1	1.5
	Totals	69	100.0

TABLE 5.7 (cont'd)

V. Issue Cluster: Base Funding

Rank	Strategy Category	Frequency	Percentage
1	consistent support for base funded programmes	8	15.1
2.5	seek non-traditional sources of support	5	9.4
2.5	prevent mixing of base and non-base funding	5	9.4
5.5	mission and goals guide programming developments	4	7.6
5.5	allocation process for all non-formula funds consistent and open	4	7.6
5.5	maintain flexible commitment to short-term programmes	4	7.6
5.5	emphasis on market orientation to programming	4	7.6
8	annual budgets should reflect non-formula sources	3	5.6
10.5	curriculum focus on generic skill training	2	3.8
10.5	inform policy makers about impact of targeted funds	2	3.8
10.5	foster community and political support	2	3.8
10.5	greater autonomy for college boards	2	3.8
16.5	support for development projects in budget	1	1.9
16.5	instructor hiring should emphasize flexible skills	1	1.9
16.5	organize programmes on a project basis to maximize flexibility	1	1.9
16.5	formula reviewed to eliminate inequities	1	1.9
16.5	promote better understanding of formula	1	1.9
16.5	emphasis on programme quality	1	1.9
16.5	more funds for system-wide initiatives	1	1.9
16.5	federal-provincial strategy to address literacy	1	1.9
	Totals	53	100.0

TABLE 5.7 (cont'd)

VI. Issue Cluster: Technological Change

Rank	Strategy Category	Frequency	Percentage
1	maintain linkages with business and industry		16.0
2	information clearinghouse on technological change	6	12.0
3	encourage different modes of programme delivery	5	10.0
6	centralized access to high tech programmes	4	8.0
6	maintain currency of curriculum and faculty	4	8.0
6	information access more important than information storage	4	8.0
6	amortization formulas for capital equipment replacement	4	8.0
6	develop cooperative ventures and resource sharing	4	8.0
9.5	emphasis on generic skill training for those displaced by technological change	3	6.0
9.5	proactive approach to implementing technological change	3	6.0
11	collective agreements need to accommodate technological change	2	4.0
13	changes to training and certification of tradesmen	1	2.0
13	institution-wide data base to facilitate programme planning	1	2.0
13	encourage programme laddering to enhance adaptibility	1	2.0
	Totals	53	100.0

TABLE 5.7 (cont'd)

VII. Issue Cluster: Federal Priorities

Rank	Strategy Category	Frequency	Percentage
1	pursue non-traditional sources of funding	6	17.6
2	provide high quality education and employment skill training	5	14.7
3.5	confirm commitment to vocational and basic education	4	11.8
3.5	curriculum adapted to short-term training	4	11.8
5	recommend policy options to decision-makers	3	8.8
7.5	examine private sector involvement in specific skill training	2	5.9
7.5	encourage increased flexibility in federal programmes	2	5.9
7.5	avoid overcommitment to short-term programmes	2	5.9
7.5	increased coordination of information about federal initiatives	2	5.9
11.5	examine demand for graduates	1	2.9
11.5	labour linked with postsecondary sector	1	2.9
11.5	effective use of volunteers in selected programmes	1	2.9
11.5	differential involvement with federal programmes	1	2.9
	Totals	34	100.0

In round one an interview format was used to collect data on programme issues presently emerging, or expected to emerge during the next five years, in the British Columbia college system. Seventy-four issues were identified under eight programme area headings: academic/transfer, career/technical, vocational, continuing education, community service, adult basic education, student support and other.

In round two a questionnaire format was used to allow panel members to rate the importance and the impact of the issues identified during the first round. Similarities and differences among the responses of the three sub-groups making up the panel were identified and discussed.

In the third round panel members were given the opportunity to reconsider their previous responses in light of additional information about the frequency tabulations of the total panel from the previous round. An analysis of the impact ratings and comparisons of the importance ratings between the two rounds were conducted in round three. Twenty-two issues with high importance ratings were selected for inclusion in the round four interview guide. Additional comments received during the previous two rounds were discussed.

In round four an interview format was used. The issues identified during round three were organized under seven major issue clusters. Panel members were asked to

respond to open-ended questions under each of these issue clusters. More specifically, panel members were requested to identify strategies that might be employed by college planners and managers to address the issue clusters identified. Panel members were also asked to reflect on the policy implications of the strategies they identified. These strategies became the basis of the discussion in the next chapter.

CHAPTER VI

IMPLICATIONS FOR POLICY DEVELOPMENT

In this chapter a discussion of the strategies suggested by members of the Delphi panel is presented. Implications for policy development are identified in the form of metapolicy propositions at the end of the chapter. The implications were drawn from the strategies identified in the round four interviews. The discussion is organized under the issue cluster headings referred to in the previous chapter. Six institutional self-study evaluation documents were reviewed for evidence to corroborate the importance of the issue cluster in the present institutional environment. If the issues identified in this study are, or will become, of paramount importance during the five-year span from 1986 to 1991 then it seemed reasonable to assume that some evidence of their emergence might be found in the most recently completed institutional self-study documents.

Computers

The introduction of computer technology in the postsecondary environment has had an enormous impact on college programmes. The discussion below considers strategies under six different headings: strategic planning, computer literacy and experimentation, curriculum design and programme delivery, acquisition strategies,

inter-institutional cooperation and intra-institutional networking.

Strategic Planning

Strategic planning at the college level should provide a guide for the future direction and development of an institution. An increasingly important element in a strategic plan for a contemporary college is the role of computers in instructional programmes. Consideration should be given to the relationship between computers and educational objectives, human resource development, and the other learning resources in the college.

There was some debate amongst the panel members as to how proactive with respect to computerization of the college such a strategic plan should be. Some panel members suggested that colleges ought to strive toward a point in the future when computers would be fully integrated into almost every programme offering. Others felt that, whereas the strategic plan ought to encourage instructors to examine the potential use of computers in their programmes, the actual decision of whether or not to do so should be left to those responsible for delivering the programmes. In general, panel members held views somewhere on the continuum between these two perspectives.

Sound strategic planning requires a thorough knowledge of the environment. In order to plan effectively for

computers in instructional programmes, college planners and managers should be actively monitoring current developments in computer technology and computer applications. At the very least they should be aware of how computers are being used in other educational settings. A number of panel members suggested that every college ought to encourage a cadre of individuals to monitor the computer environment. Some suggested that the development of an inventory of current computer uses in the British Columbia college system might facilitate the monitoring process.

Computer Literacy and Experimentation

Panel members maintained that all colleges should provide opportunity for faculty and staff to become familiar with the computer in order to decide how the computer might be used to enhance instruction. A variety of strategies were suggested including professional development opportunities sponsored at the system level, in-house workshops and mini-courses, and release time and short-term leave to accomplish specific assignments. The objective of these strategies would be to encourage rather than to enforce an acceptance of computer literacy skills.

One very positive strategy for implementing computers into the college environment is to build on the particular strengths and interests of interested faculty. To do this colleges need to foster an environment in which individual

initiatives and experimentation with computer applications in instruction are encouraged and supported. Some panel members suggested that the system ought to remain flexible enough to support projects and initiatives of this nature where appropriate. If a college is supportive, individual innovators will be able to act as models and mentors for others as they become more computer literate.

Curriculum Design and Delivery

Two areas where computers have a clear potential to have an impact on instructional programmes are in the design of curriculum and the delivery of instruction. Some panel members suggested that the full extent of this potential impact will have the effect of converting the role of the instructor away from being a conveyor of information toward becoming a manager of the learning environment. These panelists argued that the computer will take over the role of information manipulation and exchange and the instructor will be freed to take on more of a role in learning support and individual guidance.

Other panel members viewed the impact of the computer on curriculum and instruction as being less dramatic. These individuals viewed the real benefits of computer technology as being ones in which computers become yet another tool at the instructor's disposal to enhance the learning environment for students. The majority of panel members,

despite any differences they may have had on the potential impact of computers, were very clear in their opinions about the importance of the instructor in an educational environment. Most viewed the role of the instructor as vital to the teaching-learning process and had no misgivings about the en-masse replacement of instructors by computers.

The design and development of computer-related curriculum is a very time consuming and expensive undertaking. Several panel members suggested strategies to address the problems faced by colleges in this area. One of the more common suggestions involved a plea for a greater level of inter-institutional cooperation and collaboration on curriculum development projects. This strategy would be particularly relevant to larger scale applications by a number of users throughout the system.

Another strategy suggested the centralized development of curriculum, particularly in the vocational/trades programming area. Related to this strategy was the suggestion for a system-wide electronic publishing network which would ensure instant access to curriculum packages. As long as some degree of flexibility could be maintained at the individual college level for the addition of local variations in content and delivery methods, these suggestions would appear to be very cost effective. Were such a system to be established, other programme

areas, not in the vocational/trades area, might find such an approach to be of some advantage in keeping the costs of curriculum development under control.

Acquisition Strategies

A number of panel members suggested that some form of technical plan be devised at the system level for the large scale acquisition of microcomputers for the colleges. The recommended approach would be to accomplish this through the use of designated funding support for college generated plans to integrate computers into the institution. It was suggested that initiatives of the scope considered here ought to be coordinated to enhance the likelihood that funds will be used wisely and effectively.

Associated with this global approach to computer acquisition, some panel members suggested that colleges coordinate their purchasing plans to gain maximum economies of scale. Two panel members suggested a strategy which would see coordinated purchasing at the system level for the same reasons. A related strategy, made by three panel members, as the need to ensure system standards of compatibility. If inter-institutional cooperation and sharing of curriculum materials and expertise are to be achieved, not to mention some forms of inter-institutional networking, these panel members argued that a certain level of computer hardware compatibility was necessary.

Other members of the panel were less convinced of the feasibility and, in some cases, the desirability of a cooperative approach to computer acquisition. These panelists suggested strategies that would have the colleges seek alternate sources of funding support to complement funds available through the Ministry. One panel member suggested that colleges seek out ways to help faculty and students purchase computers at reduced rates on some form of buy-back scheme.

Inter-institutional Cooperation

Some strategies for inter-institutional cooperation on curriculum development initiatives have already been mentioned above. Several other strategies, however, call for inter-institutional cooperation beyond specific curriculum development projects. A number of panel members suggested that some form of articulation be set up amongst the colleges to address issues of common concern to do with computer applications and hardware developments. Other strategies suggested included inter-institutional collaboration on special initiatives like professional development opportunities and information exchanges. Still others encouraged the development of electronic networks to facilitate the free flow of information among the colleges and the Ministry. The intent behind many of these suggested strategies, as identified by those panel members

making them, was clearly to facilitate some level of system integration.

Another strategy suggested at the system level was that the Ministry, or some other system level agency, coordinate the negotiation of provincial licenses for software acquisition. Such a coordinating agency could act as a clearinghouse for software information exchange as well.

Intra-institutional Networking

Three panel members suggested strategies for colleges to establish some level of networking among work stations within a single institution to facilitate data access and information exchange. One panel member suggested that such a network might even cut down the need for the number of face to face meetings so that individuals could improve the use of their time.

Still other panel members were concerned with the efficient use of facilities and space. These individuals suggested that networking of computers within the college might help the institution break away from the traditional pattern of dedicating much needed classroom space for microcomputer stations.

In a similar fashion, the internal networking of computer stations might help to enhance student access by enlarging the number of students who could gain access to

an information system at any one time. Institution based data banks or study materials could be made available on the network and students could gain access to it from off campus and remote locations.

To facilitate these kinds of networking capabilities one panel member suggested that college information services should be organized under one administrative unit. In this way the library, audio-visual and media services, and computing services could be integrated into an information services unit to service the entire college operation.

Corroboration from Institutional Self-Study Documents

Evidence to corroborate the computers issue cluster was not as prevalent in the self-study documents reviewed as one might have anticipated given the perceived importance of the computer-related issues. This is not to suggest, however, that references to computers and computer-related issues were not to be found in many of the documents. Clearly, some colleges were much more heavily involved with the integration of computers into their operations than were others. Furthermore, judging by the comments made by one or two panel members during the final round interviews, the real impact of computers on instructional programmes is more likely to gain prominence late in the planning cycle under consideration, if not

later in the next decade. The remaining comments in this section were selected to illustrate the range of issues identified in a few of the self-study documents.

North Island College (NIC) is a small college with a dispersed operation. Their internal evaluation (self-study) was completed in 1986. References to computers in the NIC document included such concerns as the need for greater access to user training opportunities, equipment maintenance and repair, the need for continued development of computer-assisted learning facilities, and access to computer networks to facilitate inter-centre communication and student counselling. Selkirk College's (SC) self-study document, completed in late 1987, made reference to the need for clarification of the role of the college's computer services department so that it might provide increased levels of support for instruction. Rapid growth of personal microcomputers on campus was beginning to have serious implications for facility use and demands on service support. Vancouver City College's (VCC) self-study interim report, completed in 1986, made several references to computer-related issues. The range of issues covered a broad spectrum from student access and support, through instructional applications, to intra-institutional networking and communication.

Student Access

The issue of student access is fundamental to the future of the college system. Panel members identified a diverse range of strategies all related to the central theme of student access. These strategies are discussed under the following six headings: college mandate, student assistance, programme standards, resources for programmes and services, non-traditional students and distance education and outreach alternatives.

College Mandate

Colleges in British Columbia were founded around the twin principles of open access and comprehensive programming. As the college system evolved these principles have encouraged colleges, at least some of them, to explore the limits of programme options. A number of panel members suggested that the mandate for college programming needs to be clearly delineated. Others suggested that the time had come for colleges to reassess the range of programmes and activities they are involved in to ensure that all are compatible with the college's mission and goals.

Two panel members suggested that colleges ought to stop contributing to the plethora of specific career and occupational preparation options and turn their attention to an emphasis on generic skill training. Still others

suggested strategies which would encourage colleges to seek out opportunities to cooperate with other institutions and organizations in the delivery of programmes in place of attempting to operate entirely on their own. All of these suggested strategies were intended to enhance student access to preparation for entry into the work force while at the same time limiting the impact of spreading college resources too thinly across too many different programmes.

Student Assistance

One of the common barriers to student access to postsecondary education is a lack of adequate financial resources. Panel members suggested a number of strategies to remove financial barriers for students. Four panel members suggested that colleges might consider differential fee structures in selected programme areas and for selected groups of students to promote easier access. Many panel members called for the allocation of additional support for student assistance. Some suggested the need to consider alternative forms of student assistance to complement the traditional student loan programme. These individuals expressed concern about the increasing debt load postsecondary students in British Columbia face after graduation.

Other panel members came at the problem in quite a different manner. They suggested strategies that would

help to create a greater awareness of the long term benefits of education and to encourage individuals, both parents and prospective students, to plan ahead for college expenses. One panel member suggested that colleges establish trust accounts to facilitate long term investment in education on the part of parents who wished to plan ahead for their children. Others suggested the establishment of college foundations and other money raising schemes to help provide for individual student assistance.

Programme Standards

One of the most important dimensions of student access relates to the quality of the educational and/or training experience students receive once they are in a programme. Some members suggested that, given limited resources, colleges should consider making cuts which would result in the elimination of certain programmes in favour of others to ensure that overall quality is kept at an acceptable level. Others suggested that more attention should be paid to the selection and allocation of students to places in programmes. Colleges can improve access to programmes by ensuring that students have a high probability of being successful in a programme once they are admitted to it. Related to this last strategy, one panel member suggested that more attempts should be made to coordinate programmes

so that students could move from one programme option to another without having to start over again and redo skills training that they have already attained. Still others recommended the strategy of placing a quota system on certain programmes as a means of ensuring that standards are kept at a high level. Each of these strategies addresses the issue of student access through the maintenance of high programme standards.

Resources for Programmes and Services

A number of panel members recognized the need for additional funding support for programmes and student support services to enhance student access within the college system. During the years of the restraint programme in the province, funding resources for student support services were reduced to a minimum. Several strategies were suggested for identifying additional financial support and for using what was already available more efficiently. Panel members suggested that additional funding should be targeted for student support. The prime objectives of such funds should be to promote student access and retention. One panel member suggested that colleges seek out alternative sources of funding to accomplish these same objectives.

In terms of improving efficiency, strategies identified included such suggestions as increasing average

class sizes and increasing faculty workloads. The panel member who suggested these strategies, however, recognized that these ideas would only increase efficiency to a certain level and then the impact on effectiveness and quality would begin to outweigh any gains that were made. Other suggestions included using computer-aided and computer-managed instruction, and offering selected credit courses on a cost recovery basis.

Non-traditional Students

The open door principle referred to in the paragraphs above has helped shape the mix of programmes and the variety of students found in the community college environment. Several panel members felt this emphasis should continue to guide the development of college programmes and services and suggested a number of strategies designed to encourage the participation of the non-traditional student. Among the suggestions was the advice that colleges should assist non-traditional student groups in gaining access to educational opportunities at times, in places, and using delivery formats and means that promote access. An interesting suggestion made reference to the idea of a weekend college whereby students would enroll in credit courses offered on a series of consecutive weekends. Although this is not a new idea, it certainly isn't all that common throughout the college system.

Another cluster of strategies referred to the need to confirm, or in some cases establish, a commitment to adult education at the basic literacy level. For a highly developed and post-industrial nation, Canada has a significant problem with adult illiteracy (Thomas, 1983). The community college is strategically placed in the mix of educational organizations in this province to address this issue. Given the enormity of the problem and the limitations on resources to cope with it, one panel member suggested that colleges should consider increasing the use of volunteers in programmes of this nature.

Distance Education and Outreach Alternatives

A number of panel members stressed the importance of providing educational opportunities for students who, for whatever reason, were unable to participate in offerings made available on the college campus. The strategies suggested included ensuring the maintenance of regional centres, exploring alternate means of programme delivery, and promoting distance education alternatives.

Several panel members commented on the relationship between the recently formed Open Learning Agency (OLA), a consortium of distance education organizations and the colleges. They called for increased levels of cooperation between the various colleges and the OLA in order to better serve student needs. As one panel member commented,

however, the relationships between the OLA and the colleges need to be clearly sorted out in order to achieve the cooperative and collaborative relationships that ought to exist among these organizations.

Corroboration from Institutional Self-Study Documents

A concern for student access was clearly in evidence throughout each of the self-study documents examined. Discussion around such issues as affordability, physical space for student related support services, scheduling, admissions requirements and procedures, special services for the disabled, and systematic programme, service and employee evaluations made up over a third of the VCC interim report. A similar array of issues was reflected in one manner or other in almost every report.

The Northern Lights College (NLC) document, completed in 1987, included several references to issues that had a direct relationship to student access. Such topics as creative scheduling to meet the needs of particular target populations, improved information distribution about college programmes and services, and the need to pursue more scholarships and bursaries for students all exhibited a concern for student access.

Both the Fraser Valley College (FVC) document completed in 1987, and the Malaspina College (MC) document completed in 1988 reflected issues that had a bearing on

student access. The FVC report highlighted a series of issues around the topic of the quality of education, and the MC report contained a section on student support services.

Employment Markets

Changing employment markets present a special challenge for career preparation programmes. The strategies identified by panel members are discussed under the following headings: curriculum and programme design, contract and short course offerings, programme evaluation, and resources.

Curriculum and Programme Design

The spectre of changing employment markets has presented the colleges with several interesting challenges, particularly for instructional programmes that prepare students for direct employment. A number of panel members suggested that the curriculum in programmes designed to prepare students for entry into the workforce ought to be reviewed and changes made where appropriate. One panel member felt greater emphasis should be placed on the development of entrepreneurial skills. Others felt that since employment markets were changing at a rapid pace, it was progressively more difficult to know what specific skills ought to be emphasized in these programmes. They suggested strategies which would place an increasing

emphasis on generic skills training rather than on specific job training so that students would be more adaptable to new and unforeseen demands that might be placed on them.

Several panel members suggested that the curriculum in many career/technical programmes should be modularized to allow for increased flexibility in programme design and delivery. Some panel members maintained that programmes of this nature must to be increasingly sensitive to student and employer needs. They argued that colleges must promote flexible work assignments and facility use in order to cater to changing market demands.

Still others of the panel recommended that the majority of programmes preparing students for direct entry into the workforce ought to be organized on a cooperative education model, incorporating extended work experience into the training programme. They claimed that this form of programme delivery would help students become better acquainted with the demands of the particular occupational group they were preparing to enter.

Contract and Short Course Offerings

If there were a trend to more generic skill training in employment related programmes there still would remain a need for highly focussed industry specific skill training. Some panel members suggested strategies that would have most of the specific skill training done under direct

contracts with business and industry. Several panel members felt that it was appropriate for colleges to develop opportunities to provide short course offerings that would cater to this market. They suggested that special administrative units be set up to design and implement such custom made training programmes. These offerings would emphasize flexible timetable arrangements, work assignments, and facility use. One panel member suggested that a system-wide clearinghouse could be set up to disseminate information about these services to business and industry throughout the province.

Programme Evaluation

As employment markets continue to change it becomes increasingly important for faculty in programmes preparing students for employment to be aware of those changes and to make suitable adjustments. A number of panel members suggested the need for some sort of system level monitoring of employment trends to provide common information for colleges. Panel members acknowledged, however, that employment forecasting was fraught with problems of inaccuracy and that such information could only be used as a general guide. Some panel members thought that better ways of monitoring current employment trends was to use programme advisory committees more effectively and to systematically monitor graduate employability.

Another dimension of programme evaluation had to do with the quality of educational services provided. Panel members expressed some concern that strategies be in place to assess the quality of programmes. This was of particular concern as it applied to the large number of short-term courses designed to provide pre-employment training under the Canada Jobs Strategy initiative.

When programme quality was found to be wanting, when programmes were no longer in demand, or when programme graduates were unable to find related employment appropriate action should be taken. Regardless of the source of concern, several panel members felt that colleges should be prepared to substitute these programmes for others as required.

Resources

A few panel members concerned themselves with funding resources as they related to a college's ability to adjust to changing employment markets. The need was expressed for resources to be allocated in support of colleges as they attempted to cope with challenges faced in providing flexible responses to short-term demands. At the same time, a plea was made for longer-term horizons in the budgeting process so that colleges might enhance their ability to plan for change in a more creative manner. One panel member suggested that special funds be made

available in support of experimental programme initiatives. All of these strategies concerned themselves with the funding support provided for college programmes.

Corroboration from Institutional Self-study Documents

The issues related to changing employment markets were handled differently in each self-study report examined. For example, the NIC report devoted a section to occupational and economic development. Some of the issues identified in this section of the NIC document reflected a similar pattern of concerns as those identified by panel members during the course of this study. The FVC report, on the other hand, focussed on the impact of contract and short courses on the college. The primary concerns were related to issues of quality and on the ability of the college to provide adequate levels of support for programme initiatives of this sort. In a subsection of the VCC interim report, entitled "Identifying Needs for Change," the sub-committee on programme and course development commented on the need to integrate more general education into the curricula. Comments in the same section also emphasized the need to establish closer linkages with business and industry, to identify new training needs, and to monitor student demand and employability.

Faculty Retraining and Renewal

As the college system matures, the issue of human

resource development becomes increasingly more significant. The discussion of suggested strategies is organized under three headings: planning for renewal, focus on instruction, and the role of the Ministry.

Planning for Renewal

An awareness of the need for increased attention to be directed toward human resource development appears to be emerging in the colleges. Several panel members commented on the need for colleges to plan ahead for how they were going to address this cluster of issues. They maintained that the college's strategic plan should include a focus on the professional development needs of instructional faculty members, administrators, and support staff. A number of panel members suggested the need for more resources to be devoted to planning and implementation of professional development. Others focussed on the need to ensure more effective utilization of the professional development resources already available.

Panel members identified a number of specific strategies that could be pursued to encourage ongoing professional development and renewal. Four panel members recommended that the concept of educational and industrial leaves be promoted to provide faculty members an opportunity to refresh their acquaintance with a discipline of study or a particular occupational setting. Two other

panel members suggested that programmes with similar objectives located in different colleges ought to be organized in similar ways wherever possible to facilitate instructor mobility among colleges. Another strategy related to this last idea was that two or more colleges could make arrangements to jointly support professional development activities that would meet the needs of particular groups from within these institutions. One panel member suggested strategies which would permit job sharing and job-swapping to occur as a means of providing a renewal experience for appropriately qualified faculty and staff. Finally, two panel members suggested that the renewal plans ought to incorporate incentives for facilitating early retirement, particularly for those who might be unable or unwilling to take advantage of professional development and renewal opportunities.

Focus on Instruction

Several panel members felt that the primary goals of community colleges should be established around the delivery of quality instruction. They suggested that the emphasis for much of the professional development and renewal efforts ought to be directed toward in-house instruction-related initiatives. Some thought that colleges should consider requiring instructors to obtain specialized training in instructional techniques. A few

suggested that a certification process be instituted for the province, similar to those found in a number of United States jurisdictions. Other panel members recommended strategies that would place an emphasis upon teaching skills in the hiring process.

A number of panel members focussed on the design of curriculum and the changing nature of the instructor's role. Given the changing employment markets, the modularization of curriculum, and the advent of computer technology in the previous sections, panelists suggested that the curriculum in many career/technical and vocational programmes would have to be designed for increasingly rapid change. Panel members suggested that instructors should take on more of a learning manager's role in place of their traditional role as a conveyor of information.

Role of the Ministry

Several panel members commented on the role of the Ministry in providing support and encouragement for human resource development in the college system. Although some panel members suggested that the Ministry should adopt a low-key non-directive role, there was a fair degree of support for having key resource people in the Ministry that would facilitate and coordinate system level professional development activities. Similarly, there was support for the continued coordination of curriculum development in

certain trades programmes at the system level.

Corroboration from Institutional Self-study Documents

Each of the self-study documents examined something that was related to the need for faculty retraining and renewal. Issues identified included the level of resource support for educational and industrial leaves; opportunities to develop specific instructional skills; access to professional development resources (time and funding); adequate lead time for retraining, particularly for instructors whose programmes were being phased out; and the need for systematic personnel evaluation procedures. Despite the variety of comments, however, only a few of the self-study documents identified faculty retraining and renewal as a major issue in need of immediate attention.

Base Funding

The discussion on college funding is presented under two headings: resource allocation and control and focus on flexibility.

Resource Allocation and Control

The recent years of restraint in the province of British Columbia have made the colleges very sensitive to issues of budget allocation and control. Panel members offered several comments, recommendations, and strategies dealing with issues surrounding the provision of resources

to operate the college system.

One of the more common recommendations made by panel members was the need for greater consistency in the budget allocation process. Whether the funds were intended to support ongoing programmes or specifically targeted initiatives, panel members felt that funds allocated to the colleges ought to be distributed in an open and predictable manner. It was suggested that colleges ought to be able to draft annual budgets well in advance of the operating year so that planning consistent with a college's mission and goals could be achieved. The allocation formula should be reviewed and any inequities eliminated to the extent possible. Furthermore, panel members argued that resources in support of ongoing operations (base funding) should not be confused with resources that might be allocated to achieve a different purpose (non-base funding). Policy makers should be kept informed of the specific impact of non-base or targeted funding so that special initiatives of this type could be evaluated.

Other panel members suggested that greater control over resource allocation and accountability was needed at the local level. These panel members felt that it would be appropriate for college boards to exercise greater authority over college programming decisions. Such an approach would have the effect of fostering community and political support for the college system.

Focus on Flexibility

As the restraint programme began to be felt throughout the postsecondary sector in British Columbia a number of colleges initiated efforts to find alternative sources of support by contracting their services directly to local business and industry or in the international marketplace. Some panel members felt that efforts of this nature ought to be encouraged so that colleges might become less dependent on a single source of support for their programming. These panel members suggested that a college's annual budget planning should reflect at least a certain percentage generated from non-traditional sources.

In order to accomplish an objective of this nature a college would need to promote a market oriented emphasis in selected programme areas. Programme initiatives set up to respond to specific market requests should be organized on a project basis to maximize flexibility. Panel members suggested that hiring practices in these programme areas should ensure that instructors have flexible skills in order that they might cope better with the variety of demands made upon them.

Corroboration from Institutional Self-study Documents

Only one of the six self-study documents reviewed contained substantial comments on the issues related to non-base funding. This issue was not one which was

perceived to be of major importance by most college communities at large. Perhaps this was the case in most institutions because the problem was one that tended to be perceived more readily at the administrative level. Depending on how the financial arrangements were handled in each college, the majority of faculty and staff members may not have perceived non-base funding as a major source of concern.

The Fraser Valley College self-study document proved to be the exception. The FVC report contained a number of references to the challenges presented by non-based funding arrangements. Comments were made on instructional quality in short-term programmes, the difficulty with long-term planning, the extra demands placed on support services, and the impact short-term programmes and special projects have on regular college offerings.

Technological Change

Modern technology is having a dramatic effect both within colleges and throughout the community. The increasingly rapid rate of change presents special challenges for the college system. The discussion of strategies to cope with technological change is presented under two headings: planning and support and programme initiatives.

Planning and Support

Changes in technology have the potential of a significant impact on most sectors of college operations. Panel members suggested a variety of strategies to address the challenges presented by technology. Some panel members were notably more enthusiastic than others on how proactive a college should be in implementing technological changes. Nevertheless, almost all agreed that the colleges ought to integrate the new technologies, particularly the new information technologies, into their operation in order to better serve the instructional needs of students and programmes. Panel members stressed the importance of establishing an institution-wide data base to assist those involved in programme planning. They also suggested that the collective agreements colleges had with their employees should be reviewed and modified in such a way as to facilitate the accommodation of technological changes into the institution.

The sheer volume of information on technology itself was viewed as a significant challenge. Panel members suggested that an information clearinghouse be set up at the system level to facilitate the distribution of information on technological change. At the individual institution level, panel members felt the college library could be dramatically changed by developments in information technology. They suggested that with the

advent of data banks and other information networks the need for increased access to information would eventually replace the present role of the library as a place of information storage.

Programme Initiatives

Panel members felt that technological change had the potential of an impact on the design of programme curriculum and on the modes of programme delivery. The ever increasing pace of technological change was seen to be the key factor. Several strategies were suggested to assist college planners in addressing the challenges presented by these changes.

One of the implications of rapid technological change was seen as the challenge of maintaining the currency of equipment and faculty. Since colleges could not be expected to keep up with new changes in equipment in every field of instruction, panel members suggested that it was important for colleges to maintain closer linkages with business and industry in order to keep well informed of changes as they were occurring. Even if a college were unable to obtain all the latest equipment, panel members felt faculty members should be able to discuss new technology with students and demonstrate its use through site visits. Cooperative ventures and resource sharing with other postsecondary institutions as well as with

business and industry should be encouraged. At the same time the college system should examine ways to systematically replace its own equipment through a capital amortization formula.

Panel members suggested that ultimately some programmes with requirements for very expensive technology should be located in one or two places in the province. They recommended that the concept of "centres of excellence" in which a college develop a reputation as the centre of a certain type of programming needs to be explored.

A number of panel members felt that technological changes were having a significant impact on the workplace. They recommended that, in addition to providing initial training for those about to enter the workplace, colleges ought to be designing programmes to cater to those displaced by technological change. Strategies suggested included placing a greater emphasis on generic skill training to increase the flexibility of students' skills, the laddering of programmes to enhance programme adaptability, and the use of different programme delivery modes to encourage access for those who may not otherwise be able to attend.

Corroboration from Institutional Self-study Document

Reference to issues associated with technological

change were found in most of the self-study documents. In most reports the comments on technological change were incorporated into the discussion and recommendations related to the impact of computer technology. One notable exception was provided in the NIC report which, in addition to a number of other references to technology, recommended the establishment of an audio-video production facility with linkage capability to satellite communication.

Federal Priorities

The decision by the federal government to withdraw its support from certain programmes offered by the community colleges and to pursue alternate strategies through the Canadian Jobs Strategy initiative has created a number of challenges for the colleges and government of British Columbia. Panel members offered wide-ranging responses to the issues created by this shift in policy. The discussion below reflects the strategies that were suggested for each of three different levels in the college system: programme responses, college responses, and system-wide responses.

Programme Responses

Panel members suggested that, first and foremost, programmes should provide high quality education and employment skill training. They observed that the demand for graduates would always continue to be an important

indicator of programme quality and success. Within that overall objective, panel members further suggested that programmes should seek to adapt their curriculum to a modular format, one that would lend itself to being incorporated into short-term training opportunities. These two responses, an emphasis on high quality and increased flexibility in curriculum design, were judged by panel members to be the most effective responses that could be made at the programme level to the changes resulting from changing federal priorities.

College Responses

At the college level the range of strategies suggested by panel members was not much more diverse than those suggested for the programme level. Clearly colleges could pursue alternative sources of funding including becoming directly involved in the Canada Jobs Strategy initiative. Colleges might also seek to become increasingly involved in contracting their programmes and services directly to business and industry locally or to the international marketplace. Some panel members offered a note of caution about becoming overcommitted to short-term programmes. These panel members felt that colleges could eventually get themselves into difficult positions if and when support for short-term initiatives were no longer available.

System Responses

Panel members suggested that at the system level college organizations such as the Council of Principals and the British Columbia Association of Colleges should play a much stronger leadership role in recommending policy options to the provincial and federal governments on matters of concern to postsecondary education. The colleges need to have a clear sense of the government's (federal and provincial) priorities for training and education. Panel members suggested that system level college organizations along with the provincial government should lobby the federal government to increase the flexibility of federally sponsored programmes.

Panelists suggested that the provincial government should coordinate information about the various federal initiatives to ensure that all colleges were adequately informed. Also, at the provincial level, panel members suggested that the government needed to confirm its commitment to vocational and adult basic education, the two programme areas likely to be most affected by the federal withdrawal of training purchases. Panel members recommended that the provincial government undertake a thorough examination of the role of the private sector in the provision of specific employment-related skill training so that the role of the postsecondary system could be clarified. A very important first step had been taken in

the province to bring together under one portfolio job training and the postsecondary sector. According to some panelists at least, the challenge will be to see that these two sectors are brought much closer together under a unified policy framework.

Corroboration from Institutional Self-study Documents

Very little mention was made of changing federal priorities in any of the self-study documents reviewed. Some panel members made reference to the problems created by restricted student eligibility found within many of the Canada Jobs Strategy programmes, while others encouraged colleges to seek increased contact with business and industry to take advantage of the training opportunities available. On the whole, the fact that the federal government was actively changing its training priorities was not perceived as a major issue as reflected in the self-study documents.

Some Metapolicy Propositions and Specific Suggestions for Action

The fourth problem examined in this study was the derivation of metapolicy propositions from the strategies identified. These statements were identified for the consideration of college planners and policy makers at the institutional and at the system level. The propositions and accompanying specific suggestions for action were

derived by the researcher from the previous discussion and the lists of strategies identified by the panel during the round four interviews. They are intended to provoke discussion, rather than to provide prescriptions for specific policy options. The primary purpose of the statements is to act as guideposts against which policy makers might choose to review and modify new policy initiatives.

1. Commitment to computerization

   Colleges should develop long-term strategic plans for the integration of computers into the instructional and support areas of the college.

   Specific suggestions for action included:

   a) strategic plans should be linked to specific educational objectives

   b) a technical plan for the acquisition of hardware should be developed

   c) large volume purchases of micro-computing hardware to take advantage of economies of scale should be encouraged

   d) a programme of computer literacy for all faculty and staff should be encouraged

   e) a cadre of individuals in each college should monitor the latest developments in computer applications

   f) faculty experimentation with computer applications should be facilitated

   g) computer applications in instructional programmes should be supported

   h) workstations performing related functions should be linked together in networks

i) remote access to computer information banks available in the college's learning resources centre should be permitted

j) all college information services should be under one administrative unit

2. Sharing of computer expertise

Inter-college cooperation and collaboration around the sharing of ideas and expertise related to computers should be encouraged.

Specific suggestions for action included:

a) an inter-college articulation committee on computer applications in instruction should be established

b) joint sponsorship of specific curriculum and professional development projects between two or more colleges should be supported

c) the development of certain specialized curriculum should be centralized, especially in the vocational/trades area

d) a system-wide electronic publishing network should be established

e) coordinated purchasing plans for computer hardware and software acquisitions should be explored

f) some level of compatibility should be maintained among the college computing operations

g) a system-level clearinghouse to negotiate provincial licenses for the educational use of software and to disseminate computer-related information should be established

3. Confirm open access and comprehensive programming

The principles of open access and comprehensive programming should be clearly defined and confirmed.

Specific suggestions for action included:

a) the mandate for college programming should be clearly defined

b) colleges should reassess their range of programmes and activities to ensure they are compatible with their mission and goals statements

c) career/technical and vocational programmes should place a greater emphasis on generic skills training

d) cooperative arrangements between the colleges and other institutions and organizations in the delivery of programmes should be supported

e) differential fee structures for selected programmes or for selected target groups of students should be considered

f) alternative forms of student assistance to complement the traditional student loan programme should be established

g) parents and students should be encouraged to plan ahead for postsecondary expenses

h) the feasibility of college foundations and other money-raising schemes in support of student assistance should be explored

4. The quality of student access

Concerns for the amount of access to programmes and services should be balanced against the quality of that access.

Specific suggestions for action included:

a) selective cuts in programming may have to be initiated to ensure adequate resources to maintain high quality in those remaining

b) more attention should be paid to the selection and allocation of students to programmes

c) the laddering of related programmes to enhance student movement between programme options should be established

d) a quota system should be considered on certain programmes to ensure adequate resources are available to other programmes

e) additional designated funding in support of student access and retention should be allocated

f) computer-assisted and computer-managed instructional formats should be receive greater attention

5. Commitment to non-traditional students

Colleges should provide educational opportunities for those who would not normally seek access to postsecondary programmes.

Specific suggestions for action included:

a) colleges should provide educational opportunities at times, in places, and using delivery formats that enhance access for non-traditional students

b) the feasibility of weekend courses should be investigated

c) a commitment to basic literacy should be made in each college region

d) extensive use should be made of volunteers in selected programme areas such as basic literacy training, adult special education, and English language training

e) satellite campuses and regional centres should be maintained

f) distance education alternatives should be promoted

g) the relationship between the OLA and the colleges should be clarified and enhanced

6. Preparing for change

College programmes should prepare students to cope successfully with rapidly changing employment markets.

Specific suggestions for action included:

a) increased emphasis should be placed on developing entrepreneurial skills in programmes

b) skills training that is generic to occupational clusters should take priority over occupation specific training in the design of new curriculum

c) curriculum in career/technical programmes should be modular in format to increase programme flexibility

d) most programmes preparing students for direct entry into employment should be organized on a cooperative education format

e) employment trends should be monitored at the system level to provide a common information base

f) programme advisory committees should be used more effectively

g) graduate employability should be systematically monitored

h) colleges should be prepared to substitute ineffective programmes with new initiatives as appropriate

i) budgeting processes should be longer-term to enhance the ability to plan for change in a more creative manner

7. Responding to industry specific demands

Colleges should integrate industry specific and other short-term course formats into their overall mix of programme offerings.

Specific suggestions for action included:

a) career/technical and vocational programmes should be sensitive to student and employer needs

b) highly specific skill training should be done under direct contract with business and industry

c) special administrative units should be established to design and implement custom-made training

d) flexible timetables, work assignments, and facility use should be encouraged

e) the feasibility of a system-wide clearinghouse concept to promote college services should be explored

f) the quality of short-course offerings should be continually assessed

g) adequate resources in support of college efforts to maintain programme responsiveness should be allocated

8. Planning for renewal

Colleges should set out specific strategies for faculty retraining and renewal.

Specific suggestions for action included:

a) the strategic plan of a college should address human resource development needs

b) more resources should be allotted to professional development planning and initiatives

c) efforts should be expended to ensure that professional development resources are utilized effectively

d) educational and industrial leaves should be encouraged and supported

e) inter-college exchanges should be facilitated

f) some professional development activities should be jointly sponsored by two or more colleges

g) job-sharing and job-swapping should be encouraged for qualified individuals

h) incentives for early retirement should be considered

i) key resource people should be available at the system level in support of professional development initiatives

9. Focus on instruction

The delivery of quality instruction should be the highest priority in a college.

Specific suggestions for action included:

a) emphasis should be placed on in-house instruction-related initiatives in college professional development

b) instructors should be required to obtain specialized training in instructional techniques

c) a certification process for college instructors should be considered

d) teaching skills should be emphasized in the hiring of new instructors

e) instructors should focus on their role as learning managers rather than as conveyors of information

10. Continuity of Resources

Resources in support of college programmes and services should be allocated in an open and predictable manner.

Specific suggestions for action included:

a) there should be greater consistency in the budget allocation process for colleges

b) resources should be allocated in an open and predictable manner regardless of whether or not they are allocated via the formula

c) colleges should be able to draft annual budgets well in advance of the operating year

d) the allocational formula should be reviewed and any inequities should be eliminated

e) resources in support of base operations should not be confused with resources in support of specifically targeted initiatives

f) policy makers should be kept informed of the specific impact of special initiatives

g) college boards should seek greater control over the resource allocation and accounting process

h) colleges should seek out alternative sources of funding support

i) programme initiatives set up to respond to specific market requests should be organized on a project basis to maximize flexibility

11. Planning for technological change

Colleges should incorporate technological changes into their programmes and services as appropriate to better serve the instructional needs of the faculty and the learning needs of the students.

Specific suggestions for action included:

a) institution-wide data bases should be established to facilitate programme planning

b) collective agreements between colleges and their employees should be reviewed and modified appropriately to facilitate the accommodation of technological change

c) an information clearinghouse should be set up at the system level to distribute information on technological change

d) close linkages with business and industry should be encouraged in order to keep informed of new technological developments

e) colleges should investigate ways to systematically replace equipment through some form of capital amortization formula

f) programmes requiring expensive high technology should be centralized in one or two locations

g) the concept of "centres of excellence" should be considered

h) colleges should design programmes for those workers displaced by technological change

12. Changing federal priorities

Colleges should consider adjusting their programme development strategies to cope with changing federal priorities for occupational training and skill development.

Specific suggestions for action included:

a) colleges should concentrate on offering high quality education and employment skill training

b) programme curriculum in employment-related programmes should be designed in a modular format to facilitate adaptations to short-term training opportunities

c) colleges should consider pursuing alternative sources of funding support

d) colleges should seek to contract their services and programmes to business and industry, and to the international marketplace

e) colleges should take care not to become overcommitted to short-term programmes

f) system-level college organizations such as the Council of Principals and the British Columbia Association of Colleges should play a much more active role in recommending policy options to the federal and provincial governments

g) the federal government should be lobbied to increase the flexibility of their programs

h) the provincial government should coordinate the distribution of information about federal initiatives to ensure all colleges are kept informed

i) the provincial government should confirm its commitment to vocational training and adult basic education

j) the Ministry should examine the role of the private sector in the provision of specific employment-related skills so that the role the postsecondary system should play could be clarified

Summary

This chapter provided a discussion of the strategies identified during the round four interviews. The strategies were discussed under seven issue cluster headings used in the organization of the interviews: computers; student access; employment markets; faculty retraining and renewal; base funding; technological change; and federal priorities. The discussion was further grouped under major topic headings in each cluster. Evidence to corroborate the prominence of the issues within the current institutional context was sought from a selection of six institutional self-study documents completed within the last two years.

At the end of the chapter a number of policy implications were derived from the discussion on strategies. The policy implications were summarized in the form of a series of metapolicy proposition statements. These proposition statements were developed for the consideration of planners and policy makers at the institutional and at the system level. The statements were not designed to suggest particular policy options, but rather to provoke discussion in the policy and planning arena. Specific suggestions for action accompany the proposition statements. They were compiled to assist in providing a focus for such discussion.

CHAPTER VII

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

This chapter contains the summary and conclusions of the study. In the summary section of the chapter the purpose of the study, the conceptual framework, and methodological approach are reviewed. The study's respondent groups are noted and the procedures for instrument development, data collection, and data analysis are described. The major findings are outlined in response to the questions that guided the inquiry. Conclusions drawn from the findings are stated in the form of generalizations about programme issues in the British Columbia college system. The implications section discusses insights derived from the study for college administration, theory development in the politics of education, and for the application of the Delphi technique in educational research. Some proposals for further research are also presented.

Summary of the Study

This section provides a review of the purpose of the study, the conceptual framework, the methodological approach, the panel selection process, instrument development and data analysis and the findings of the study.

Purpose of the Study

The purpose of the study was to identify priority issues expected to emerge in specific programme areas in the British Columbia college system during the 1986-1991 planning cycle. Four questions guided the research:

1. What are the priority issues that are expected to arise in the programme areas of British Columbia colleges during the 1986-1991 planning cycle?

2. How do the views of Ministry of Advanced Education and Job Training officials, college chief executive officers, and college senior instructional administrators compare with respect to the identification of emerging programme issues?

3. What strategies might colleges employ to address the priority issues?

4. What metapolicy propositions, if any, can be established from the strategies identified?

Conceptual Framework

The framework for this research was derived from a goal-centred organizational perspective. The central concern was actual programme operations rather than abstract mission and goals statements. Thus, a major objective of the study was to examine the real-transitive goals of the community college system.

The specific focus of the investigation was on the identification of issues arising in various programme areas commonly found in the British Columbia college system. The priority issues that were most likely to

influence the actions of college leaders over the next few years were taken to be a direct reflection of the real goals in that system. Participants in the study were asked to identify strategies that might be employed to address the priority issues. These strategies were examined for possible implications for policy initiatives.

Methodological Approach

The methodology employed in this study was based primarily on the use of the Delphi technique. The Delphi technique is a form of group forecasting procedure which employs an iterative design and allows a group of individuals collectively to address a complex problem. The particular form of Delphi employed in this study most closely resembled a policy Delphi. Although some opportunity for consensus building was allowed for in the sequence of rounds used in the study, it was not in any way forced on the participants. The particular methodological features of the study included: a systematically selected panel of participants, a semi-structured open-ended interview format, an opportunity to clarify reasons for importance, an opportunity to adjust ratings, an opportunity to synthesize ideas, and a final report that discussed strategies and policy implications.

Panel Selection Process

The selection of panel respondents was a critical

phase in the research process. Turoff (1970) identified inadequate attention to the process of panel selection as a potential major limitation to the eventual success of a policy Delphi.

The twenty-four panel members selected for this study came from three distinct sub-groups of college planners and managers. The first sub-group consisted of eight senior officials from the Ministry of Advanced Education and Job Training. The remaining two sub-groups came from the college environment: eight chief executive officers and eight senior instructional administrators. The college based sub-groups were selected using carefully specified procedures that relied on panel member reputation, and ensured some degree of representation from metropolitan colleges, non-metropolitan colleges and colleges in remote locations in the province.

Instrument Development and Data Analysis

The inquiry involved a preliminary pilot study and a four round Delphi process. The instrument employed in each round was developed using the information collected in the previous round. As a consequence it was difficult to separate instrument development from procedures of data collection and analysis.

The pilot study consisted of six interviews using individuals drawn from a government department and a community college in Alberta. A draft interview format was

delivered to pilot study participants. Pilot study participants responded to and provided helpful comments on the design of the interview guide and associated material. These individuals did not participate as members of the Delphi panel in the main study.

In round one a semi-structured interview guide was developed and distributed to the panel members in advance of the interview along with an explanatory handout outlining what a Delphi study was and providing an illustrative example. Care was taken to select a format for the first round that would provide a degree of structure for the interview and at the same time allow some flexibility so as not to constrain the free flow of ideas. Panel members were asked to identify emerging issues in each of the following programme areas: academic/transfer, career/technical, vocational, continuing education, community service, adult basic education, student support, and other. Data obtained during the interviews were analyzed, coded, sorted, placed into categories, and resorted. Four hundred and eighty-one issue statements were derived from the initial interview data. A final list of seventy-four issues was identified at the end of the analysis phase for round one. These issues became the basis for the round two questionnaire.

In the round two questionnaire the seventy-four issues were listed under the eight programme area headings

used in the previous round. The purpose of the round was to ask panel members to rate the issues identified in round one on two separate scales: importance of the issue in the next five years and likely extent of impact in the college system. The importance ratings used a five-point scale and the impact rating used a three-point scale. Complete instructions were listed on the covering page of the questionnaire for the interpretation of the two scales.

The data collected from the questionnaires were tabulated by using frequency scores for both rating distributions. A master key was produced which became the basis for the round three questionnaire. The data for the importance ratings were further analyzed using a battery of descriptive statistics. These measures allowed for comparisons among the three sub-groups of the panel.

The purpose of the round three questionnaire was to allow the panel members an opportunity to adjust their ratings in light of the frequency tabulations obtained during the previous round. Individualized questionnaires were prepared for each panel member responding to the second round questionnaire. Panel members were not obliged to alter their ratings if they did not want to.

The data analysis in round three allowed for three specific objectives to be achieved. The impact ratings were analyzed, the importance ratings for rounds two and three were compared, and the top rated issues were

identified for inclusion in the round four interview guide. Additional comments from panel members gathered in rounds two and three were also analyzed.

The purpose of round four was to identify strategies college planners and managers might employ to address the priority issues identified in the previous round. An interview format was used in this round. The twenty-two issue categories identified as being of high importance were organized under seven issue clusters in an interview guide to facilitate discussion. Panel members were asked to respond to the questions at two levels: the individual institution level and the system level.

The data collected during the round four interviews were coded and sorted using similar procedures to those in the first round analysis. The issue clusters identified in advance of the round were used to provide a structure for the analysis. The lists of strategies were analyzed for policy implications in chapter six.

Summary of Findings

The major findings of this research are summarized under the four questions that guided the research:

1. What are the priority issues that are expected to arise in the programme areas of British Columbia colleges during the 1986-1991 planning cycle?

Identifying the issues. Of the four hundred and eighty-one issue statements identified in the first round interviews, the majority by far were found under the

career/technical and vocational programme area headings. Community services, continuing education, and student support, on the other hand, received the least attention in terms of numbers of issue statements made by the participants in this study. The remaining programme areas: academic/transfer, adult basic education, and other each prompted a number of issue statements that was somewhere between the two extremes.

Determining priorities. Following the coding, sorting and resorting phase of the analysis in the first round the four hundred and eighty-one issue statements were reduced to seventy-four issues. These issues were rated over the second and third rounds of the study in terms of their importance for, and their impact on, the college system. All the issues with mean importance scores of 4.0 or above on a five-point scale were considered to be high priority issues. Twenty-two issues were rated of high importance at the end of round three. At least one issue was selected from each programme area with the exception of the academic/transfer area.

The twenty-two issues were organized into seven clusters, each with a common theme. The themes included: computers, student access, employment markets, faculty retraining and renewal, base funding, technological change, and federal priorities. These themes were used as the organizing framework for the interview during the fourth

and final round.

Analysis of impact ratings. Sixty-one of the seventy-four issues were determined to have a system-wide impact. A further six were listed under sub-group of colleges implying that these issues were of importance to some colleges and not others. None of the issues were judged to be specific to an individual college. All but one of the issues rated of high importance by the total panel were listed as having a system-wide impact. The one high importance issue in the sub-group of colleges category identified a concern that was of particular interest to non-metropolitan colleges.

2. How do the views of Ministry of Advanced Education and Job Training officials, college chief executive officers, and college senior instructional administrators compare with respect to the identification of emerging programme issues?

Comparison of panel sub-groups. A comparison of panel sub-groups was carried out as part of the round two analysis. Particular attention was focussed on the similarities and differences that existed in the way the three sub-groups rated the importance of the issues identified in round one. Overall there appeared to be only a moderate degree of agreement among the three groups as to the perceived importance of the issues. The highest degree of agreement was between chief executive officers and senior instructional administrators. The overall agreement between Ministry officials and college-based managers was

lower in both cases.

Further analysis at a more detailed level, however, revealed several interesting variations. Ministry officials and senior instructional administrators appeared to rate career/technical issues with a much higher degree of agreement than existed between each of the other pairs. Similarly, Ministry officials and chief executive officers were alike in their ratings of student support. Senior instructional administrators found themselves in a moderately high level of agreement with Ministry officials on the issues in the adult basic education programme area. This was not the case, however, for the same two groups with respect to the continuing education programme issues where the relationship was moderately negative.

Comparison of round two with round three. Thirty-one mean scores and forty-five coefficients of variation were altered between round two and round three. The majority of mean scores showed a slight increase and the majority of the coefficients of variation showed a slight decrease. The slight decrease in the coefficients of variation suggested that there was a shift towards a greater degree of consensus in the third round. Evidence for this trend was also found in a comparison of the paired rank-order correlation coefficients for the panel sub-groups between the two rounds.

3. What strategies might colleges employ to address the priority issues?

Identification of strategies. A total of four hundred and sixty strategies were identified during the round four interviews. These strategies are briefly summarized under the issue cluster headings used in the interview guide.

1. Computers. The largest number of strategies were identified under the computer issue cluster heading. A number of panel members recommended that college strategic planning address the integration of computers into college operations. They also suggested that efforts to promote computer literacy amongst faculty and staff should be supported, as should individual initiatives to experiment with the use of computers in instruction. Panel members believed that curriculum development would benefit from a cooperative approach as would strategies to acquire new equipment. Several recommendations were made to promote inter-institutional and intra-institutional networking to improve communication.

2. Student access. Panel members perceived the need for a clear statement about the mandate of a community college. Some panel members argued that college planners and managers should stop contributing to the plethora of specific career and occupational training programmes and turn their attention to an emphasis on generic skill training. Others encouraged college planners and managers

turn their attention to an emphasis on generic skill training. Others encouraged college planners and managers to promote a more cooperative approach to the delivery of education and training. Virtually all panel members agreed there needed to be increased funding allocated for student assistance. Many panel members believed that it was important for colleges to maintain high quality in all their programmes. Others encouraged the colleges to continue serving the non-traditional student and to support distance education alternatives.

3. Employment markets. A number of panel members suggested that changing employment markets would have an impact on curriculum and programme design. Some recommended that colleges actively pursue the offering of contract and short-term courses. Several panel members made reference to the importance of systematic programme evaluation and the need for adequate resources.

4. Faculty retraining and renewal. Panel members encouraged colleges to plan for renewal. They also recommended that the majority of a college's professional development efforts be devoted toward improving instructional quality. The Ministry of Advanced Education and Job Training has an important role to play in supporting and facilitating retraining and renewal.

5. Base funding. Panel members suggested that college budgeting should be more stable and predictable.

They also recommended that greater authority and control over the budgeting process should be exercised at the local level through the college boards. Several panel members felt it was important for colleges to increase the flexibility of their programmes to better cope with funding uncertainties.

6. Technological change. Panel members suggested a variety of strategies to address the challenges presented by changing technology. They also identified a number of areas in which specific programme initiatives will be needed.

7. Federal priorities. Shifts in federal policy on skill training for industry were viewed as having a potentially dramatic impact on certain college programmes. Panel members recommended several strategies to cope with changing federal priorities at the programme, college, and system level.

4. What metapolicy propositions, if any, can be established from the strategies identified?

Implications for policy makers. The twelve metapolicy propositions, listed below, were derived by the researcher from the lists of strategies identified by panel members during the round four interviews. These statements are proposed for the consideration of college planners and policy makers at the institutional and system level. The statements are intended to provoke discussion, rather than to provide prescriptions for specific policy options. If

successful the statements will act as useful guideposts against which new policy initiatives might be reviewed and modified.

1. Colleges should develop long-term strategic plans for the integration of computers into the instructional and support areas of the college.

2. Inter-college cooperation and collaboration around the sharing of ideas and expertise related to computers should be encouraged.

3. The principles of open access and comprehensive programming should be clearly defined and confirmed.

4. Concern for the amount of access to programmes and services should be balanced against the quality of that access.

5. Colleges should provide educational opportunities for those who would not normally seek access to postsecondary programmes.

6. College programmes should prepare students to cope successfully with rapidly changing employment markets.

7. Colleges should integrate industry specific and other short-term course formats into their overall mix of programme offerings.

8. Colleges should set out specific strategies for faculty retraining and renewal.

9. The delivery of quality instruction should be the highest priority in a college.

10. Resources in support of college programmes and services should be allocated in an open and predictable manner.

11. Colleges should incorporate technological changes into their programmes and services as appropriate to better serve the instructional needs of the faculty and the learning needs of the students.

12. Colleges should consider adjusting their programme development strategies to cope with changing federal priorities for occupational training and skill development.

Conclusions

Six general conclusions based on the findings of this study are presented in this section.

1. Emerging acceptance of system. Perhaps the most general conclusion that can be drawn from the findings of this investigation is that there is an emerging acceptance of (or resignation toward) system thinking in the British Columbia community and regional colleges. Evidence to support this generalization can be found from two sources. The first comes from the observation that the overwhelming majority of priority issues were viewed by panel members to have an impact at the system-wide level. Conversely, not one of the issues, high priority or otherwise, was seen to be specific to any particular institution in the system. The second source of evidence arises from the number of strategies offered by panel members that called for inter-institutional cooperation and collaboration between the colleges. This conclusion is further substantiated by the increasing number of initiatives that are being sponsored by groups with a system-wide mandate like the council of principals, the association of colleges (college boards), or the college and institutes educators association (association of faculty unions).

2. **A state of flux and uncertainty.** The second conclusion one can draw from the findings of this study is that the British Columbia college system is in a dynamic state and is experiencing high levels of uncertainty. Evidence to support this conclusion can be drawn from almost every one of the high priority issue clusters identified at the end of the third round of this research project. For example, the issue clusters on technological change and employment markets are largely concerned with changing conditions and the issue cluster on base funding is primarily concerned with the problems created by uncertainty. Change in and of itself is not all that negative. Indeed, many positive goals and objectives can be achieved when a system develops a flexible response to changing conditions. The problem, in part, for the college system in British Columbia is that the flexibility that is being developed is almost always in a reactive mode. The colleges have had very little opportunity to exercise a sustained proactive approach to developing new strategies to meet changing conditions of student and employment demands.

Patterns of governance and system coordination are changing fairly rapidly. As an example, over the two year period of this investigation the government ministry responsible for colleges has re-organized at least four times. At the time of writing, the Ministry is in the

throes of yet another major change. Along with these changes in system coordination there has been considerable uncertainty in the funding allocation and programme support processes. It has been extremely difficult for colleges to predict with any degree of certainty the levels of resources they will have to work with from year to year. Similarly, colleges have not always had clear feedback from the Ministry on the programme approval process.

3. **Absence of a policy framework.** The third conclusion is that there does not appear to be a clearly articulated policy framework to guide the overall development of the college system. The present statement of access describes what is currently happening, but falls somewhat short in providing much in the way of direction for the future. These panel members had difficulty relating their understanding of emerging issues in the various programme areas to the system mission and goals statement. As such, the statement was rarely referred to during the course of the investigation.

A diversity of mandates. The fourth conclusion, which follows from the third, is that the traditional mandate of the colleges to offer comprehensive programming is being interpreted quite differently by and for the various colleges in the system. This diversity is not altogether undesirable. Some authors, acknowledged earlier in the study, (see Beinder 1983a, and Dennison 1979b) have

argued very forcefully that it is the obligation of the colleges to reflect the regional variation of demand for educational services as it is found throughout the province. The problem under the present arrangements, if there is one at all, is that there does not appear to be a clearly articulated master plan for the programme approval process. College boards at the local level are not given the authority over programme approval and the approval process at the system coordination level remains a mystery to many of the college-based panel members participating in this study.

5. **Adjustment to technological change.** The fifth conclusion that can be drawn from the findings in this investigation is that colleges are increasingly feeling the impact of technological change. It was evident from the range of emerging issues that were identified by the panel participants that the impact of technological change was judged to be a significant factor in many sectors of programme operations. Three of the seven issue clusters used in the final round interviews were primarily concerned with matters related to technological change. Two of the issue clusters addressed the application of technology to the instructional environment directly, whereas the third focussed on the indirect impact that technology was having on college programmes in the form of changing employment markets. How well colleges are able to respond to the

myriad of challenges presented by technological change will, at least in part, determine how well they are able to adapt to the complex environments of the future.

Faculty as an important resource. The sixth conclusion drawn from the findings of this investigation is an observation on the importance of a college's human resources. Panel members were virtually unanimous in their recognition of the importance of the instructor in the teaching-learning process. Despite the most sophisticated of technological advances, the participants in this study did not foresee any decline in the need for highly qualified and skilled professional faculty. This was particularly the case within the limited time span under consideration in this project.

Some panel members believed that what would begin to change was the faculty members role within the instructional process. Faculty would begin to be more like learning managers, de-emphasizing their roles as conveyors of knowledge and factual information. The application of computers and other forms of information technology would free the instructor to perform other roles, both within and outside the classroom.

Implications

Several implications can be offered on the basis of the findings and conclusions drawn from this investigation. This section contains implications for

system and institutional administration, implications based on theoretical perspectives, and methodological insights. Finally, some implications for research are offered.

Implications for System and Institutional Administration

Doucette, Richardson and Fenske (1985) have argued that it is essential for colleges to translate their mission statements into action and to promote a convergence of support from their various constituencies. The findings and conclusions drawn from this research have the potential to be used in a similar manner. They contain a number of implications for the operation of colleges and the college system. The challenge remains for college planners and policy makers to respond to these implications in a manner which is consistent with the colleges' missions and which will promote widespread support. The implications are discussed under the following headings: policy framework and resource support, student access, changing employment markets, computers and technology, and human resource development.

1. **Policy framework and resource support.** It would appear that the level of uncertainty characteristic of the last half decade has created an environment in which long range planning is extremely difficult to carry out with any degree of conviction or enthusiasm. Panel members believed that what is needed is a clarification of the mandate of the college system and a renewed commitment to that

mandate. This is not to suggest that all colleges should offer the same set of programmes or deliver their programmes in the same manner. Rather, it is to argue that even in a system that recognizes the importance of institutional independence and regional diversity, there ought to be a common set of identifiable goals and objectives towards which all the colleges are striving. Efforts should be channelled into creating a policy framework which will provide a sense of direction for the system. Within that framework college budgets should be allocated in an open and predictable manner.

The decision of the federal government to withdraw support from the purchase of training in college-based programmes has created yet another challenge for ongoing operational funding. Panel members in this study suggested several strategies to deal with this challenge. In the main they recommended that colleges should strive to increase the flexibility of their programme curricula and formats while at the same time continuing to emphasize high quality educational and training experiences. They also stressed the importance of the role that system level organizations such as the British Columbia Association of Colleges and the provincial government might play in lobbying the federal government to consider modifying the flexibility of federally sponsored programmes.

2. **Student access.** Colleges in British Columbia were

founded around the principles of open access and comprehensive programming. These principles have played a major role in influencing the subsequent growth and development of the college system in the province. There was strong support amongst panel members for both principles. Several panel members suggested, however, that what was needed at this time was for the college mandate to be carefully defined, and for appropriate limits to be established for the interpretation of each principle. Within these limits the colleges should make every effort to facilitate the access of all students by whatever means at their disposal, including lobbying for greater levels of student support.

A prime consideration in the access question is the quality of college programming. Student access is not facilitated if, once in the door, the programmes students find themselves enrolled in are not up to acceptable standard. Panel members recommended a number of strategies which would enhance the quality of student access by focussing on the quality of instructional programmes and support services.

Colleges should strive to provide meaningful educational opportunities to the non-traditional student. The college movement in British Columbia was established, at least in part, by the desire to expand access to postsecondary education and training for those who would

not otherwise have had the opportunity. In this sense the colleges were seen to be a key element in the social and economic evolution of the province. Many panel members would like to see this evolution continue and access broadened to include an increasingly wider market of non-traditional students.

The term non-traditional students is used in this context to represent a broad range of individuals who for one reason or other are not normally able to gain entry to postsecondary educational opportunities. It includes such diverse individuals as the adult illiterate, the physically and mentally handicapped, the shift worker who is unable to attend a class on a regular basis, and the professional living in a small rural community. The list is far too long to attempt to be comprehensive. The challenge for the colleges is to provide programmes and services at times, in places, and using delivery formats that enhance access for these individuals.

3. **Changing employment markets.** Employment markets in today's economic climate are experiencing an ever increasing pace of change. This presents an enormous challenge for college programmes that prepare students for direct entry into the work force. Panel members made a number of recommendations that had implications for the design and delivery of career/technical and vocational programmes. The key recommendation is that all

employment related programmes should strive toward preparing students to cope successfully in a rapidly changing employment market.

Rapid change in the employment market can often result in employment shortages as well as employment redundancy. Employers and employees alike may require retraining opportunities of a highly specific short-term nature in order to re-tool for the challenges ahead. These requirements may result from the demands created by a new technological innovation in the work place or from the need for workers to pursue a different line of employment requiring new and unfamiliar skills.

Some colleges have been more willing than others to respond to the demand for short-term highly specific training. The majority of panel members seemed to be in favour of colleges developing the ability to respond to this type of programming demand. A number of panel members felt this type of training ought to be provided under contract to particular employers or industry groups. Others felt it was quite appropriate for colleges to offer courses on their own. Regardless of the source of support, colleges should seek to integrate these short-term course formats into their mix of programme offerings to ensure programme quality and to enhance the flexibility of the college's service to the community and region.

4. **Computers and technology.** The integration of the

new technologies, particularly computing and information technologies into the college environment has been and will increasingly become an important concern for the colleges. College administrators and decision-makers both at the institution-level and the system-level need to become better informed of the real potential and the challenges created by this technology. Colleges should seek to address this potential and challenge within the context of a long-range strategic plan to guide the integration process. This is not to suggest that a detailed plan be developed that nails down every potential use or application package. Rather, the intent of the plan ought to be to set clear guidelines so that the special initiatives that are developed and supported in the colleges from time to time are consistent with the educational mission and goals of these institutions.

Integrating the new technology into an educational setting presents a formidable challenge for all levels in an organization. This is particularly true for smaller institutions in which resources to devote to the integration process are few and far between. As such, it is important that colleges become actively supportive of inter-college cooperation and collaboration around the sharing of ideas and expertise. Colleges ought to be encouraged to seek out opportunities to work on collaborative projects and activities which would result in

mutual benefit for the participants and for the college system as a whole.

5. **Human resource development.** More attention needs to be directed toward the enhancement of human resource development in the colleges. Even though the colleges are comparatively young organizations, their work force has been a very stable one. The years of restraint over the last half decade have resulted in limited opportunities for growth and renewal. Several panel members commented on the need for colleges to plan ahead for the long-term revitalization and renewal of faculty, staff and administrators alike. They suggested that human resource development be incorporated as a critical element in the strategic planning process.

Assuming that the central focus of the college is on the delivery of quality education and training, the primary emphasis of professional development efforts should be focussed on instruction. Several suggestions were made that were intended to promote instructional expertise. Perhaps the most significant recommendation was that instructors should be encouraged to focus on their role as managers of the learning process rather on their role as the conveyors of knowledge and information.

Implications Based on Theoretical Perspectives

The two theoretical perspectives on political organization, resource dependency and institutional

isomorphism (Weeres, 1984), were partially supported by the findings of this study. Each perspective is examined in turn along with supporting evidence drawn from material included in this study. Comment is provided on the utility of the conceptual framework that guided this investigation and some tentative predictions are offered in terms of each of the theoretical perspectives.

Resource dependency. Resource dependency theory maintains that organizations that are dependent on their environment for resources will conform to the pressures and directions of that environment. Weeres (1984, p. 9) postulated that "the greater the need for the resource and the larger the amount of the resources provided the greater the dependency." This study provided ample evidence to support such an explanation of college politics. The issue cluster on changing federal priorities focussed directly on resource allocation. College reponse to the Canadian Jobs Strategy initiative illustrates the basic principles of a resource dependency perspective.

Some panel participants claimed that an overdependence on a centralized authority structure was beginning to create a problem for them in terms of the full implementation of their institutional missions. As the dependency on central resource allocation has increased the ability of the colleges to respond to the local communities has decreased. The power of the local college boards has

been eroded relative to the powers assumed by the central authorities. It was this very trend that motivated Beinder's (1983a) impassioned plea for a return to an "emphasis on the community."

Institutional isomorphism. Institutional isomorphism focusses on homogenization processes that have more to do with the quest for political power, legitimacy, and status than economic efficiency or resource dependency (Weeres, 1984). The theory is interested more in explanations of why organizations become increasingly similar over time rather than attempting to explain how it is that they are unique. Evidence to support this theoretical position tended to be more subtle than was the case with the resource dependency theory.

One source of support for the theory came from the observation that colleges appear to have borrowed many elements of programme design directly from the traditional format of academic education found in the universities. Moreover, many college programmes that have nothing to do with universities or transfer were organized in a similar fashion.

This example illustrates the coercive and the mimetic influences of isomorphism. The coercive influence is found in the resource allocation mechanisms and the programme approval processes that all colleges share in common. These features have helped to shape the delivery

format of most of the curriculum found in the college system. The mimetic influence is illustrated in that many programmes, even those not directly related to university courses or programmes, are modelled on a similar format (semester-based) to those found in the university setting rather than on a format which might be more familiar in the work place.

A second source of support for the theory was obtained from the observation that none of the emerging issues identified by the panel members was viewed as unique to an individual college. This was quite a surprising result, especially when one recognizes that two thirds of the panel members were college-based personnel. Panel members were asked to identify emerging issues in their programmes, not system-wide issues, and yet there was a remarkable degree of overlapping concerns throughout the various institutions.

This example illustrates both the coercive and normative influences of isomorphism. Once again the coercive influence is found in the common legal requirements and organizational structures employed throughout the British Columbia college system. The normative influence is illustrated by the common professional background exhibited by most college instructors and administrators. This normative influence is reinforced through regular inter-institutional

disciplinary-based articulation meetings held on an annual or semi-annual basis in most programme areas.

Comment on the conceptual framework. The conceptual framework performed two important tasks in this investigation. Firstly, it helped to illustrate the relationship between the essential conceptual elements under consideration. Secondly, it provided a guide to the chronology of the inquiry. In addition, the framework was organized in a manner which should lend itself to an examination of other postsecondary educational settings.

The research procedures utilized in this project were both linear and cummulative in orientation. The information gathered in one round of the Delphi process was used as the basis for the next round's investigation. The total information available was accumulated over the four rounds of the study.

Some tentative predictions. One important feature of the conceptual framework was that it was placed in the context of the policy and resource environment of the British Columbia college system. The theoretical perspectives used to interpret these environments provided a basis for some tentative predictions for the future development of the college system.

To the extent that the resource dependency theoretical perspective accurately predicts the behaviour of college planners and policy makers, the concept of a

centrally controlled college system should continue to develop in British Columbia. The degree of local authority and control exercised by college boards will be largely dependent on an explicit government decision to decentralize decision making. If current trends prevail this change in policy is unlikely to occur in the postsecondary sector. The institutional isomorphism theoretical perspective predicts that college planners and policy makers will tend to establish similar policies and structures as they strive for legitimacy, resources, and power. With this perspective in mind one can predict that it will be increasingly difficult to distinguish between colleges as the concept of system continues to develop. Similarly, the necessity for the central authority to closely monitor college operations should diminish as the isomorphic forces exert their influence.

Methodological Insights

From the point of view of this researcher there were a number of advantages and some clear disadvantages to the Delphi technique as it was employed in the investigation reported here. These considerations along with some of the major features of this particular study are discussed in the paragraphs below. A limited number of suggestions for other researchers wishing to use the Delphi technique are identified throughout the discussion.

Advantages. Several writers (Turoff, 1970; Judd,

1972; and Uhl, 1983) have identified the critical role that careful panel selection plays in the eventual success of a project employing the Delphi technique. The selection of panel members for this research was based on a number of key attributes to assist in the identification process: individual reputation and expertise, positional power and influence, and regional and functional diversity. The eight panel members selected from the Ministry included a cross-section of senior programme and management personnel. The selection was made easier by the fact that it included virtually every member of the senior management staff. College-based panel members were nominated by a diverse group of individuals each with a unique perspective on the college system.

The care taken in the selection process for this study was seen as a real advantage by the researcher. All those who participated on the panel were able to make significant contributions to the research. In spite of the challenges presented by an extremely dynamic situation which is discussed in more detail below, the researcher was able to maintain one hundred percent participation in the first and last rounds. The utility of the information obtained throughout a Delphi study relates directly to the care taken in identifying panel participants. The researcher wishing to employ a Delphi technique for data gathering and analysis is well advised to spend

considerable effort on the selection of panel participants in order to enhance the outcomes of the research.

A second major advantage of the study was that the Delphi technique was iterative and cumulative in nature. The researcher was able to approach a fairly complex subject in an open manner without the same level of concern that the right questions may not be asked as might be the case in the "one-shot" questionnaire approach. The Delphi technique allowed for each round to build on the information gained in the previous round.

A third major advantage of the study was the interview process in the first and last rounds. By using a semi-structured open-ended interview in person with each panel member in the first round the researcher was better able to co-opt the interest and support of the panel members for the study objectives. If time and resources are available, employing an interview, particularly in the first round of a Delphi, will enhance the likelihood that panel members will become committed to the goals of the research.

The telephone interview technique employed in the fourth round was extremely efficient. Only two interviews had to be rescheduled from the initial times identified. All the interviews were conducted within a period of four weeks without causing major disruptions to the researcher's full-time employment. The researcher might consider this

method of interviewing, especially when the respondents are geographically dispersed and time is an important consideration. The telephone interview is less desirable, however, in situations where the respondents and researcher are unfamiliar with one another.

Disadvantages. One major challenge facing the researcher in this study was the tremendous volatility of the employment status of panel members during the course of the data gathering phase. Ten of the twenty-four panel members changed their employment status in slightly less than one year, the period in which the data for the study were gathered. Four of those were no longer connected with the college system. This challenge proved to be more a disadvantage in principle than practice in that all panel members were contacted and agreed to participate in the final round interview.

The second major disadvantage of the approach used in this study was the time taken to complete the data gathering and analysis over the four rounds. The data gathering phase took just under a year. Ideally a task of this scope would use a team approach to monitor the study. Given the personal educational objective of the research, a study team was out of the question. The problem created by the lengthy period of time in data gathering was that some of the issues identified had already been addressed by major policy initiatives before the final round. While it

was gratifying to have the importance of the issues confirmed, it also created a perception on the part of some of the panel members that the issue was no longer quite as urgent because it had already been addressed. This may have limited the variety and number of strategies respondents were willing to suggest during the final interview.

Implications for Further Research

A number of recommendations for further research can be identified that are based on the findings of this study. The ideas outlined in the paragraphs below suggest other applications of the Delphi technique in the college environment, further explorations into the realm of theory development in the politics of postsecondary education, and continued investigations with any one or more of the several issue clusters identified in this study.

1. This study employed a Delphi technique with a panel of college managers and Ministry officials as senior decision makers in the college system. In another context, Uhl (1983) used the Delphi as a strategic planning tool in a university setting. A study that would link together elements of the Uhl approach and the approach adopted in this study would be to conduct system-wide strategic planning on one of the major issue clusters identified in this study such as student access or changing employment markets. A broadly-based panel consisting of

representatives from all the major stakeholders in the college system could be invited to participate in the exercise.

2. Earlier in this decade Barrington (1983) was suggesting that a Delphi study using electronic networking be attempted amongst the Alberta colleges. The technology is now in place throughout most of the British Columbia colleges to facilitate an exercise of this nature. Perhaps an exploratory study of this type could focus on the application of the new information technologies in education.

3. Another area that deserves further attention is the development of theoretical explanations for the political functioning of the college environment. Some support was found for both the resource dependency and the institutional isomorphism explanation of inter-institutional organizational behaviour. The support for the institutional isomorphism theory, however, was only marginal and indirect. The theory has the potential to be a very powerful explanatory tool and deserves to be examined further in the college context.

4. The resource dependency theory predicts that as an organization becomes increasingly dependent on a particular source in the environment for the provision of resources the more responsive that organization becomes to the demands of that provider. This prediction could be

tested in a longitudinal case study with a single institution or in a comparative case study approach using a college that is largely dependent on government funding and one that has developed substantial alternative sources of funding.

5. Finally, there are a number of studies that should be conducted to follow up on and examine in more depth each of the major issue clusters identified in this study. Already there are signs that these issues are receiving increased attention. Several of the topics have been the focus of recent system-level and provincial reports (See for example British Columbia, 1987b; British Columbia, 1987c; Association of Canadian Community Colleges, 1986; and Instructional Development Advisory Committee, 1987).

Concluding Remarks

One of the essential components of effective strategic planning in an organization, or a system of organizations, is the clarification of mission and goals. Organizational planners and managers must have a clear sense of purpose and direction in order to plan for the future and guide the actions of the present. For the researcher seeking to understand the goals of an organization it is critical to look beyond the surface level of mission and goal statements. It has been argued

throughout this study that the actual activities of the organization are a much more accurate reflection of the real mission and goals of the organization.

This study has identified a number of emerging programme related issues in the British Columbia college system. The high priority issues in particular constitute significant challenges for the colleges to cope with and respond to over the next half decade. The strategies and policies colleges adopt to address these issues will reflect the real goals of the system.

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APPENDIX I

ROUND ONE: PACKAGE OF MATERIALS

Date

Dear :

Thank you for agreeing to participate in the research study on identifying the policy implications of emerging programme issues in the British Columbia college system over the next half decade.

You will be joining approximately twenty-three other individuals as members of a Delphi panel. The panel membership will consist of senior officials from the Ministry of Post-Secondary Education, chief executive officers from the colleges, and senior programme administrators, also from the colleges. The panel will not be meeting as a group, but a summary of the collated information gathered in each round will be shared with all panel members. Be assured that individuals will not be identified in the analysis. One of the advantages of a study of this type is that ideas can be shared freely and agruments probed while maintaining an atmosphere of anonymity.

The study will consist of four major rounds of interviews and/or questionnaires between now and December, each building on the information gained from the previous round. Between rounds you may be contacted individually for clarification, additional input, or further consideration. For more information on the Delphi technique employed in this study, consult the green handout in your package of material.

At the conclusion of the study you will receive a summary document which should provide useful input for planning and policy-making. In addition, data collected in the study will be reported in the dissertation I am writing as part of my doctoral degree in educational administration. Again, let me assure you that the information obtained during this study will respect the anonymity of the individual participants.

Please complete the personal data sheet enclosed and return it in the envelope provided. If you should wish to discuss any aspect of the study with me, please give me a call at 853-7441 (days) and 853-0808 (evenings). I will be contacting you for a first-round interview once I can work out a satisfactory travel schedule. Thanks again for your participation.

Respectfully,

Don Tunstall

IDENTIFYING THE POLICY IMPLICATIONS OF EMERGENT PROGRAMME ISSUES IN THE BRITISH COLUMBIA COLLEGE SYSTEM

Personal Data Sheet

Name____

Mailing Address_______________________________________

____

_____________________________ Postal Code __________

Telephone number (days)__________(evenings)___________

Name of Assistant/Secretary__________________________

Periods of absence from your office of more than 5 consecutive days during the period May-December 1986:

____

____

____

Highest Educational Qualification:____________________

Field of Specialization:_________________________

Present position in postsecondary education:

____

Length of time in position:____________

Most recent previous position in postsecondary education:

____

Location:___________________________________

Length of time in position:____________________

Total number of years involved in postsecondary education:

____

(Please return in the envelope provided.)

WHAT IS A POLICY DELPHI? *

A policy Delphi is an alternative to a face-to-face committee meeting process. It is a free-form organizational structure designed to facilitate the exchange of ideas, encourage in-depth thinking, and provide an anonymous forum to explore alternatives about specific policy areas. It is not intended as a substitute for the policy formulating process.

In a policy Delphi a hand-picked panel of experts pursues a topic through a series of iterative rounds until a clear indication of the group's opinions and attitudes emerges, and the implications for policy development are explored.

The general characteristics of a policy Delphi commonly include:

1. Formulating the issues
2. Identifying assumptions underlying the issues
3. Determining initial positions on the issues
4. Exploring reasons for disagreement
5. Determining what might be done to address the issues
6. Pursuing implications

When consensus is obtained on an issue, it is dropped from further exploration and reappears only in the summary document. When polarization of views occurs, the study monitor can design questions to probe differences.

A panel member has certain rights:

1. You may choose not to answer a question if you feel your judgement is risky.
2. You may restate a question and answer that one if you feel that the original is misleading.
3. You may consult with information sources normally available to you to respond to particular questions so long as your response remains that of an individual rather than as a spokesperson.
4. You may express short arguments or comments on any judgement about which you feel confident.

* (adapted from Barrington, 1983)

5. You may comment on questionnaire design and make suggestions for change.
6. You may question the summary of responses if you feel that the interpretation is incorrect.
7. You may call the study monitor for clarification of your task.

The following example illustrates the use of a straight questionnaire approach to a policy Delphi designed to establish goals for a specific college program. In round one an open-ended questionnaire would be circulated to panel members asking the following:

Round One

As a result of experiences provided by Alpha College, graduates from Program X should:

a) Know:

b) Be able to:

c) Feel:

etc. . . .

About six to eight weeks later when the initial data was compiled into categories, a second questionnaire would be created based on the first round data. Panel members would then be asked to rate the importance of the various categories of responses to determine priority goals.

Round Two

As a result of experiences provided by Alpha College, graduates of Program X should:

	Low Importance				High Importance
a) Know:	1	2	3	4	5
1. About the world in which they live.					

If you select 4 or 5, give your argument in support of the importance of this goal:

If you select 1 or 2, give your arguments in support of the importance of this goal:

etc. . . .

One month later, after the ratings had been compiled, a round three questionnaire would be prepared showing both the majority selection and the individual's selection as well as arguments pro and con the importance of specific goals. In the example, panel members are being asked to reconsider their responses in light of the responses provided by other panel members.

Round Three

For each item, your previously stated choice is circled while the choice most frequently selected by other participants is indicated by a triangle. In the light of arguments made by other respondents, reconsider each item. You may change your response if you wish.

As a result of experiences provided by Alpha College, graduates of Program X should:

	Low Importance				High Importance
a) Know:	1	2	3	4	5
1. About the world in which they live.					

PROS:

- should be prepared not only for career but for life.
- Should have broader knowledge in case of later career change.

CONS:

- Not enough time to cover program material, let along other subjects.

etc. . . .

Within a month, when the final priority goals had been identified, a further questionnaire would be developed pursuing these goals for policy implications.

Round Four

The following goals for Program X were selected as Important to Very Important by a majority of respondents. Please indicate what policy implications this would have for Alpha College.

a) Knowledge:

1. Students would have a broader awareness of the world in which they live.

POLICY IMPLICATIONS:

etc. . . .

In this example, a final summary document on policy implications of recommended goals for Program X would then be developed and passed on to policy makers and program designers.

Identifying the Policy Implications of Emergent Programme Issues in the British Columbia College System

Round One

IDENTIFICATION OF PROGRAMME ISSUES

WORKSHEETS

(To be used in preparation for an interview - not intended as a formal questionnaire)

PROGRAMME ISSUES IN THE BRITISH COLUMBIA COLLEGES 1986 - 1991

ROUND ONE - INTERVIEW FORMAT

BACKGROUND:

In round one an interview format will be used. During the interview you will be asked to identify programme related issues that you think will be of importance over the next five years in each of the following categories:

1. Academic/transfer (university level; general education)
2. Career/technical (paraprofessional training)
3. Vocational (trades, job preparation)
4. Continuing Education (job-related upgrading; part-time vocational)
5. Community Service (general interest courses; community forums, etc.)
6. Adult Basic Education (academic upgrading; ESL, etc.)
7. Student support (library; adult special ed.; counselling)
8. Other (you define as needed)

INSTRUCTIONS:

A. **Reflect on the major programme categories.**
Using the recently distributed draft of the Mission, Goals and Objectives Review (Ministry of Education, March 6, 1986), please reflect on each of the programme categories listed above to identify issues of current or emerging concern. Do not be constrained by the category labels, they are only intended as a guide to assist your reflection. Feel free to identify issues that might cut across more than one programme area.

B. **Identify the issues of importance within each category.**
Identify the programme related issues which you consider are of importance now or will become important in the near future in British columbia colleges. On the worksheets accompanying these instructions, space has been provided for three issues for each programme category. This is only intended as a guide. You may wish to identify fewer or more than three for any of the categories.

C. **Support each selection with a reason.**
For each programme issue identified, please give your reason for the importance of your selection. An example is provided below:

VOCATIONAL - Issues of importance in the vocational programme category during the next five years include:

a) Issue: The problem of equipment obsolescence will increase.

Reason for importance:	Capital funding has been limited in the first half of the decade.

Thank you for giving your consideration to this request. I look forward to our interview.

1. ACADEMIC/TRANSFER

Issues of emerging importance in the academic/transfer programme category during the next five years include:

a) Issue:

Reason for Importance:

b) Issue:

Reason for Importance:

c) Issue:

Reason for Importance:

2. CAREER/TECHNICAL

Issues of emerging importance in the career/technical programme category during the next five years include:

a) Issue:

Reason for
Importance:

b) Issue:

Reason for
Importance:

c) Issue:

Reason for
Importance:

3. VOCATIONAL

Issues of emerging importance in the vocational programme category during the next five years include:

a) Issue:

Reason for
Importance:

b) Issue:

Reason for
Importance:

c) Issue:

Reason for
Importance:

4. CONTINUING EDUCATION

Issues of emerging importance in the continuing education programme category during the next five years include:

a) Issue:

Reason for
Importance:

b) Issue:

Reason for
Importance:

c) Issue:

Reason for
Importance:

5. COMMUNITY SERVICES

Issues of emerging importance in the community services programme category during the next five years include:

a) Issue:

Reason for Importance:

b) Issue:

Reason for Importance:

c) Issue:

Reason for Importance:

6. ADULT BASIC EDUCATION

Issues of emerging importance in the adult basic education programme category during the next five years include:

a) Issue:

Reason for Importance:

b) Issue:

Reason for Importance:

c) Issue:

Reason for Importance:

7. STUDENT SUPPORT

Issues of emerging importance in the student support programme category during the next five years include:

a) Issue:

Reason for
Importance:

b) Issue:

Reason for
Importance:

c) Issue:

Reason for
Importance:

8. OTHER

Other programme related issues of emerging importance over the next five years include:

a) Issue:

Reason for Importance:

b) Issue:

Reason for Importance:

c) Issue:

Reason for Importance:

ADDITIONAL COMMENTS:

APPENDIX II

ROUND TWO: PACKAGE OF MATERIALS

Date

Dear :

Enclosed please find the survey instrument for round II of the Delphi study, "Identifying the Policy Implications of Emergent Programme Issues in the British Columbia College System," which I am conducting in partial fulfillment of my doctoral dissertation in Educational Administration.

During the summer the round I interviews were completed. The thought-provoking information obtained in the interviews has resulted in a challenging document for round II. Your task for this round is to rate the importance of the issues listed. For those issues rated by you as a three or higher, please indicate the pervasiveness of the impact on the right-hand side.

The issues selected for this survey instrument represent a distillation of the material obtained during the interviews. Over 480 programme-related issues were identified. Only issues that were mentioned by two or more panel members were included for further consideration. In addition, obvious duplications were eliminated as were issues that were difficult to present in the format selected for this survey. Space has been provided at the bottom of each major section of the questionnaire for you to write in issues that you feel have been clearly overlooked.

Although the survey looks rather bulky, it has been field-tested as taking approximately 30 to 35 minutes to complete. You may want to attempt the survey over two or three sittings rather than all at once. Please consult the instructions on page one carefully before you proceed.

I would like to receive your responses by November 10, 1986. Thank you once again for your continued cooperation. I'm looking forward to your responses.

Sincerely,

J.D. Tunstall
Doctoral Candidate
Work: 853-7441, loc. 350
Home: 853-0808

IDENTIFYING THE POLICY IMPLICATIONS OF EMERGENT PROGRAMME ISSUES IN THE BRITISH COLUMBIA COLLEGE SYSTEM

The first round of interviews resulted in the identification of over 480 program-related issues. Subsequent analysis and refinement of this extensive list yielded 74 issues which, in turn, will constitute the basis for the second-round questionnaire. During the analysis and refinement phase, obvious duplications were eliminated as were issues that were difficult to define in the format used in this questionnaire. In addition, only issues that were mentioned by two or more panel members were included for further consideration.

The objective of this, the second round, is to identify the potential importance of each of the issues and to assess the pervasiveness of their impact on the system.

INSTRUCTIONS

Importance

Place a circle around the importance rating of your choice. A high rating on the importance scale should be interpreted as agreement that the issue will be of importance within the next five years (1986-1991). Conversely, a low rating should be interpreted as meaning that the issue is of low importance or is not very likely to be of importance over the same five-year time span.

Impact

For each of the issues that you rate as three or higher on the importance scale, place a check mark to indicate the level at which the issue is most likely to be of concern. That is, if the issue tends to be specific to one or possibly two institutions, rate it institution specific. On the other hand, if the issue is likely to have an impact for most colleges, then rate the issue system-wide. Rate the issue subgroup of colleges if the issue is likely to be of concern to a specific cluster of colleges within the province.

Example:

ISSUE: 1. Continued restraint may seriously effect college programs.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

At the end of each section there are a number of blank spaces provided for you to identify an issue if you think an important one has been overlooked.

ACADEMIC/TRANSFER

ISSUE: 1. Colleges may not be able to sustain viable second-year academic programmes.

Importance

Very Low ________________ Very High
1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 2. The relationships between the various post-secondary institutions offering academic education (i.e. universities, colleges, and the open-university consortium) may not be clear enough.

Importance

Very Low ________________ Very High
1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 3. Articulation between colleges and high schools on matters of academic programme planning and requirements may not be sufficient.

Importance

Very Low ________________ Very High
1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ACADEMIC/TRANSFER (cont'd)

ISSUE: 4. The lack of an Associate of Arts and/or Science degree at the college level may hinder the recognition of college academic programmes in their own right.

Importance

Very Low ____________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 5. The placing of limits on the number transfer students to the Arts faculty at U.B.C. may have an impact on academic enrollments at colleges.

Importance

Very Low ____________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 6. The renewed interest in outcomes measures may result in a decrease of support for college academic programmes.

Importance

Very Low ____________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ACADEMIC/TRANSFER (cont'd)

ISSUE: 7. The demand for a specified "core" curriculum of general education requirements at the university and in the workplace may significantly limit the range of academic offerings in the colleges.

Importance

Very Low ______________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 8. Combined pressure to increase workload and productivity may lead to morale problems amongst academic faculty and influence their capacity to perform.

Importance

Very Low ______________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 9. Continued reductions in funding support for colleges may result in larger than proportional reductions to academic programmes.

Importance

Very Low ______________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: ____

____

____

____

CAREER/TECHNICAL

ISSUE: 10. The influence of the computer may significantly alter the curriculum in many career/technical programmes.

Importance

Very Low ____________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 11. There may be increased tension created for career/technical programmes by the expectations and demands for specific job-related skills by employers on the one hand, and the need to expose students to more broadly-based generic skills for initial enfranchisement training on the other.

Importance

Very Low ____________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 12. The bridging of programmes between trades, technologies and the provincial universities may not be effective.

Importance

Very Low ____________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

CAREER/TECHNICAL (cont'd)

ISSUE: 13. Advisory committees may not be kept up-to-date and used effectively.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 14. The establishment of 'centres of excellence' emphasizing different programme specialties throughout the province may undermine the comprehensive nature of college programming.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 15. Selected programmes in high technology and other specialized career/technical fields may require durations of greater than two years in length in order to be effective.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: ____

____

____

____

CAREER/TECHNICAL (cont'd)

ISSUE: 16. Equipment maintenance and replacement and the pace of change in high technology in the workplace may create major challenges for colleges, particularly in trades and career/technical programmes.

Importance

Very Low ____________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 17. The cooperative work experience model may not be integrated well enough into career/technical programmes.

Importance

Very Low ____________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 18. The limits on the role of external accreditation bodies in influencing the design and delivery of certain career/technical programmes may not be clear.

Importance

Very Low ____________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

CAREER/TECHNICAL (cont'd)

ISSUE: 19. New types of career programmes required in response to changing economic conditions, and lack of additional funds to start new programmes, may increase pressure for programme substitution.

Importance

Very Low ____________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 20. Certain career/technical programmes may not be justified if employment markets remain at a low level.

Importance

Very Low ____________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 21. Career/technical programmes may not be flexible enough in instructional design and delivery.

Importance

Very Low ____________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

CAREER/TECHNICAL (cont'd)

ISSUE: 22. Certain of the specialized high technology programmes may find it difficult to attract well-prepared students.

Importance

Very Low ____________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 23. Rapid changes in technology may create an increasing need for faculty renewal and retraining and for curricular revision in order for career/technical programmes to remain current.

Importance

Very Low ____________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: ____

____

____

____

VOCATIONAL

ISSUE: 24. The shift towards employer-based training as reflected in the Canadian Jobs Strategy initiative may lead to a significant reorientation of the delivery of trades training.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 25. The federal decision to reduce CEIC seat purchases in vocational programmes may seriously alter the ongoing financial support for trades programmes.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 26. The apprenticeship system as a model of trades training may no longer function adequately to prepare young people for careers in the trades fields.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

VOCATIONAL (cont'd)

ISSUE: 27. An uncertain economic environment and rapid technological changes may create a need to incorporate more generic level skills in trades training.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 28. Rigid adherence to traditional programme delivery formats and college collective agreements may tend to outweigh the importance of employer and student needs in the consideration of new trades training alternatives.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 29. Centralized control of public colleges may restrict their ability to engage in cooperative ventures with the private sector.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

VOCATIONAL (cont'd)

ISSUE: 30. The lack of a clear statement of purpose for trades related programming may limit the ability of this sector of college programming to function adequately over the next few years.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 31. The inability of trades instructors to maintain adequate industry contact may result in outdated instructional staff and curriculum.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 32. Continued low levels of employer demand in certain trades fields may influence student demand in associated college-based trades programmes.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

VOCATIONAL (cont'd)

ISSUE: 33. Competency-based training in the trades may continue to present a challenge for colleges in terms of staff training, curriculum development, and capital resource utilization.

Importance

Very Low ____________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: ______________________________

____

____

____

CONTINUING EDUCATION

ISSUE: 34. The emerging importance of part-time vocational and occupational upgrading may tend to blur the lines between full-time programmes and continuing education.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 35. As part-time activity increases, the unequal treatment of students in cost recovery programmes and subsidized programmes may become increasingly contentious.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 36. The proliferation of short-term training programmes such as those generated through Canadian Job Strategy contracts may increase the need to implement mechanisms of quality control.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

CONTINUING EDUCATION (cont'd)

ISSUE: 37. In order to be able to respond to industry specific requests and job strategy initiatives, increasing attention may need to be given to the importance of maintaining a viable infrastructure (core programmes, administration, support services) in the colleges.

Importance

Very Low ______________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 38. Retraining of the un- and under-employed may become an increasingly important challenge for the college system.

Importance

Very Low ______________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 39. Colleges may need to become even more creative and innovative in the design and delivery of part-time vocational and occupational upgrading in order to compete successfully with private sector educational alternatives.

Importance

Very Low ______________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

CONTINUING EDUCATION (cont'd)

ISSUE: 40. In an era of prolonged economic upheaval and uncertainty, the demand for part-time access to training and short-term occupational upgrading may tend to increase dramatically.

Importance

Very Low ______________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: ____________________

____

____

____

COMMUNITY SERVICES

ISSUE: 41. The community services role of colleges may become different for nonmetropolitan colleges than it will be for metropolitan colleges.

Importance

Very Low ______________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 42. As financial resources become more limited, it may be increasingly more difficult for colleges to maintain store front operations and regional centres in smaller communities.

Importance

Very Low ______________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 43. Colleges may become increasingly involved in establishing and coordinating community-based systems for the delivery of general interest programming.

Importance

Very Low ______________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

COMMUNITY SERVICES (cont'd)

ISSUE: 44. Community services activity in the colleges may shift from a focus on general interest programming to a focus on community related issues and events.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 45. There may be a need to determine the role and extent of college involvement in local economic development initiatives.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: ____

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ADULT BASIC EDUCATION

ISSUE: 46. Federal immigration policies and college initiatives in international education may ensure the continued demand for Adult Basic Education and, more specifically, English Language Training.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 47. The level of articulation between Adult Basic Education programmes on the one hand, and high school programmes and other college programmes on the other, may not be sufficient.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 48. The relationship between the school districts and the colleges wit respect to the delivery of basic education to adults may not be clear.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ADULT BASIC EDUCATION (cont'd)

ISSUE: 49. Adult Basic Education programmes may need to incorporate functional skills for the work environment as well as academically oriented objectives.

Importance

Very Low ______________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 50. Continued high levels of adult illiteracy may create a greater need for colleges to incorporate new instructional methods and technologies to facilitate learner effectiveness, increase student motivation, and enhance retention.

Importance

Very Low ______________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 51. There may be a need to reconfirm the province's continuing commitment to Adult Basic Education in light of the planned federal withdrawal of support for this level of programming.

Importance

Very Low ______________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: ____

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STUDENT SUPPORT

ISSUE: 52. Limitations of financial resources for students may seriously undermine the accessibility to post-secondary education for increasingly larger numbers of students.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 53. Colleges may not be providing adequate leadership in the area of co-curricular activities.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 54. The microcomputer may become a necessary tool in support of instruction throughout the college.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

STUDENT SUPPORT (cont'd)

ISSUE: 55. There may be a clear risk to the ongoing quality and standards in many programme areas as learning resources (libraries) continue to be under-funded.

Importance

Very Low ____________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 56. Career guidance and employment information projection systems may not be very reliable in the current uncertain economic environment.

Importance

Very Low ____________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 57. The advent of new information technologies may seriously alter the way libraries and other support services are used.

Importance

Very Low ____________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

STUDENT SUPPORT (cont'd)

ISSUE: 58. Adult Special Education initiatives may continue to need specially identified resources in order to survive.

Importance

Very Low ____________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 59. The levels of student counselling and programme advising may not be sufficient to meet current and future levels of demand.

Importance

Very Low ____________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: ____

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OTHER

ISSUE: 60. The impact of new informational and instructional technologies may alter the way programmes are operated. Instructors may tend to become more like learning managers and tutors than teachers.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 61. The base level allocation of funds to support college programmes may continue to decrease relative to the special funds allocated to specifically identified projects and activities.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 62. The absence of a block grant funding system for major programme clusters may inhibit a college's ability to develop increased flexibility in the delivery of programmes.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

OTHER (cont'd)

ISSUE: 63. Continued restraint in funding college operations may have a negative impact on a college's ability to operate effective programmes and services.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 64. Alternative sources of revenue may become ever more important over the next few years.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 65. Formula-funding may not be equitable in that the weightings and durations are inappropriately set.

Importance

Very Low ________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

OTHER (cont'd)

ISSUE: 66. Pressures may increase to push colleges into partnerships with business, industry and the private sector to provide new training opportunities.

Importance

Very Low ____________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 67. Centralized governance and control over college operations may limit the colleges' ability to establish and deliver programmes to meet locally identified needs.

Importance

Very Low ____________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 68. The emergence of international education may gain an increasingly higher profile in the college system.

Importance

Very Low ____________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

OTHER (cont'd)

ISSUE: 69. The roles of the various levels of government in terms of their respective responsibilities for post-secondary education in Canada may not be sufficiently clear.

Importance

Very Low ____________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 70. Human resource development may become an increasing area of concern as faculty and staff grow older and increasingly more remote from their students' point of view.

Importance

Very Low ____________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

ISSUE: 71. The level of inter-institutional cooperation in the design and delivery of programmes may not be sufficient.

Importance

Very Low ____________________ Very High

1 2 3 4 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☐ System-wide

OTHER (cont'd)

ISSUE: 72. The value of strategic five-year planning as it relates to the programme planning process may not be well understood by all those working in the college system.

Importance

Very Low ____________________ Very High
1 2 3 4 5

Impact

☐ Institution Specific
☐ Subgroup of colleges
☐ System-wide

ISSUE: 73. The role of distance education alternatives may not be sufficiently clear.

Importance

Very Low ____________________ Very High
1 2 3 4 5

Impact

☐ Institution Specific
☐ Subgroup of colleges
☐ System-wide

ISSUE: 74. There may be an increasing need to recognize and plan for the place of the computer within all college programme areas.

Importance

Very Low ____________________ Very High
1 2 3 4 5

Impact

☐ Institution Specific
☐ Subgroup of colleges
☐ System-wide

ISSUE: ____

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APPENDIX III

ROUND THREE: PACKAGE OF MATERIALS

Date

Dear :

The Delphi process calls for information gained during a round to be shared with all panel members. The enclosed document is a summary of round two responses. Your individual responses are recorded in blue pencil, and the summary of all responses is indicated by the numbers in circles immediately below or beside each response category. In this, the third round, I am offering you the opportunity to alter any or all of your responses in light of this information.

If you intend to make any alterations, please do so as soon as possible. Mark your new response(s) in red pen or in some manner so that the new response(s) are clear. Use the return envelope provided and place in the mail on or before January 31, 1987. If I don't receive your form I will take it that you do not wish to make any alterations.

Shortly after I have received and collated any alterations that are made I will be in contact with you to arrange a final interview. Thank you very much for your continued participation and cooperation. I hope the enclosed information will be of as much interest to you as it has been to me.

Sincerely,

J.D. Tunstall
Doctoral Candidate

JDT/dd
Encl.

IDENTIFYING THE POLICY IMPLICATIONS OF EMERGENT PROGRAMME ISSUES IN THE BRITISH COLUMBIA COLLEGE SYSTEM

The first round of interviews resulted in the identification of over 480 program-related issues. Subsequent analysis and refinement of this extensive list yielded 74 issues which, in turn, will constitute the basis for the second-round questionnaire. During the analysis and refinement phase, obvious duplications were eliminated as were issues that were difficult to define in the format used in this questionnaire. In addition, only issues that were mentioned by two or more panel members were included for further consideration.

The objective of this, the second round, is to identify the potential importance of each of the issues and to assess the pervasiveness of their impact on the system.

INSTRUCTIONS

Importance

Place a circle around the importance rating of your choice. A high rating on the importance scale should be interpreted as agreement that the issue will be of importance within the next five years (1986-1991). Conversely, a low rating should be interpreted as meaning that the issue is of low importance or is not very likely to be of importance over the same five-year time span.

Impact

For each of the issues that you rate as three or higher on the importance scale, place a check mark to indicate the level at which the issue is most likely to be of concern. That is, if the issue tends to be specific to one or possibly two institutions, rate it institution specific. On the other hand, if the issue is likely to have an impact for most colleges, then rate the issue system-wide. Rate the issue subgroup of colleges if the issue is likely to be of concern to a specific cluster of colleges within the province.

Example:

ISSUE: 1. Continued restraint may seriously effect college programs.

Importance

Very Low ________________ Very High

1 2 3 [✓ 4] 5

Impact

☐ Institution Specific

☐ Subgroup of colleges

☑ System-wide

At the end of each section there are a number of blank spaces provided for you to identify an issue if you think an important one has been overlooked.

ACADEMIC/TRANSFER

ISSUE: 1. Colleges may not be able to sustain viable second-year academic programmes.

Importance

Very Low ____________________ Very High

1	2	3	4	5
0	2	8	8	4

Impact

☐ 0 Institution Specific

☐ 14 Subgroup of colleges

☐ 7 System-wide

ISSUE: 2. The relationships between the various post-secondary institutions offering academic education (i.e. universities, colleges, and the open-university consortium) may not be clear enough.

Importance

Very Low ____________________ Very High

1	2	3	4	5
3	12	3	2	2

Impact

☐ 0 Institution Specific

☐ 2 Subgroup of colleges

☐ 9 System-wide

ISSUE: 3. Articulation between colleges and high schools on matters of academic programme planning and requirements may not be sufficient.

Importance

Very Low ____________________ Very High

1	2	3	4	5
2	7	9	4	0

Impact

☐ 2 Institution Specific

☐ 0 Subgroup of colleges

☐ 14 System-wide

ACADEMIC/TRANSFER (cont'd)

ISSUE: 4. The lack of an Associate of Arts and/or Science degree at the college level may hinder the recognition of college academic programmes in their own right.

Importance

Very Low ____________________ Very High

1	2	3	4	5
5	6	4	4	3

Impact

☐ 1	Institution Specific
☐ 1	Subgroup of colleges
☐ 13	System-wide

ISSUE: 5. The placing of limits on the number of transfer students to the Arts faculty at U.B.C. may have an impact on academic enrollments at colleges.

Importance

Very Low ____________________ Very High

1	2	3	4	5
1	5	8	6	2

Impact

☐ 1	Institution Specific
☐ 2	Subgroup of colleges
☐ 15	System-wide

ISSUE: 6. The renewed interest in outcomes measures may result in a decrease of support for college academic programmes.

Importance

Very Low ____________________ Very High

1	2	3	4	5
0	7	3	9	2

Impact

☐ 0	Institution Specific
☐ 1	Subgroup of colleges
☐ 16	System-wide

ACADEMIC/TRANSFER (cont'd)

ISSUE: 7. The demand for a specified "core" curriculum of general education requirements at the university and in the workplace may significantly limit the range of academic offerings in the colleges.

Importance

Very Low ________________ Very High

1	2	3	4	5
②	⑬	②	④	①

Impact

☐ ⓪ Institution Specific

☐ ② Subgroup of colleges

☐ ⑨ System-wide

ISSUE: 8. Combined pressure to increase workload and productivity may lead to morale problems amongst academic faculty and influence their capacity to perform.

Importance

Very Low ________________ Very High

1	2	3	4	5
⓪	③	⑤	⑦	⑦

Impact

☐ ⓪ Institution Specific

☐ ③ Subgroup of colleges

☐ ⑰ System-wide

ISSUE: 9. Continued reductions in funding support for colleges may result in larger than proportional reductions to academic programmes.

Importance

Very Low ________________ Very High

1	2	3	4	5
②	⑪	②	①	⑤

Impact

☐ ⓪ Institution Specific

☐ ② Subgroup of colleges

☐ ⑧ System-wide

ISSUE: ____

____

____

____

CAREER/TECHNICAL

ISSUE: 10. The influence of the computer may significantly alter the curriculum in many career/technical programmes.

Importance

Very Low ________________ Very High

1	2	3	4	5
1	3	1	11	6

Impact

☐ 0 Institution Specific

☐ 2 Subgroup of colleges

☐ 9 System-wide

ISSUE: 11. There may be increased tension created for career/technical programmes by the expectations and demands for specific job-related skills by employers on the one hand, and the need to expose students to more broadly-based generic skills for initial enfranchisement training on the other.

Importance

Very Low ________________ Very High

1	2	3	4	5
0	4	7	5	6

Impact

☐ 0 Institution Specific

☐ 0 Subgroup of colleges

☐ 19 System-wide

ISSUE: 12. The bridging of programmes between trades, technologies and the provincial universities may not be effective.

Importance

Very Low ________________ Very High

1	2	3	4	5
1	6	4	10	1

Impact

☐ 0 Institution Specific

☐ 4 Subgroup of colleges

☐ 13 System-wide

CAREER/TECHNICAL (cont'd)

ISSUE: 13. Advisory committees may not be kept up-to-date and used effectively.

Importance

Very Low ____________________ Very High

1	2	3	4	5
①	⑤	⑦	⑧	①

Impact

☐ ④ Institution Specific

☐ ③ Subgroup of colleges

☐ ⑫ System-wide

ISSUE: 14. The establishment of 'centres of excellence' emphasizing different programme specialties throughout the province may undermine the comprehensive nature of college programming.

Importance

Very Low ____________________ Very High

1	2	3	4	5
⓪	⑦	⑤	⑦	②

Impact

☐ ⓪ Institution Specific

☐ ⑦ Subgroup of colleges

☐ ⑨ System-wide

ISSUE: 15. Selected programmes in high technology and other specialized career/technical fields may require durations of greater than two years in length in order to be effective.

Importance

Very Low ____________________ Very High

1	2	3	4	5
⓪	①	⑦	⑨	⑤

Impact

☐ ③ Institution Specific

☐ ⑪ Subgroup of colleges

☐ ⑧ System-wide

ISSUE: ____

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CAREER/TECHNICAL (cont'd)

ISSUE: 16. Equipment maintenance and replacement and the pace of change in high technology in the workplace may create major challenges for colleges, particularly in trades and career/technical programmes.

Importance

Very Low ______________________ Very High

1	2	3	4	5
0	0	1	8	13

Impact

☐ 0 Institution Specific
☐ 2 Subgroup of colleges
☐ 20 System-wide

ISSUE: 17. The cooperative work experience model may not be integrated well enough into career/technical programmes.

Importance

Very Low ______________________ Very High

1	2	3	4	5
0	5	8	9	0

Impact

☐ 4 Institution Specific
☐ 4 Subgroup of colleges
☐ 10 System-wide

ISSUE: 18. The limits on the role of external accreditation bodies in influencing the design and delivery of certain career/technical programmes may not be clear.

Importance

Very Low ______________________ Very High

1	2	3	4	5
1	7	5	9	0

Impact

☐ 0 Institution Specific
☐ 5 Subgroup of colleges
☐ 11 System-wide

CAREER/TECHNICAL (cont'd)

ISSUE: 19. New types of career programmes required in response to changing economic conditions, and lack of additional funds to start new programmes, may increase pressure for programme substitution.

Importance

Very Low ____________________ Very High

1	2	3	4	5
(0)	(0)	(2)	(10)	(10)

Impact

☐ (0) Institution Specific

☐ (2) Subgroup of colleges

☐ (20) System-wide

ISSUE: 20. Certain career/technical programmes may not be justified if employment markets remain at a low level.

Importance

Very Low ____________________ Very High

1	2	3	4	5
(0)	(4)	(2)	(10)	(6)

Impact

☐ (3) Institution Specific

☐ (2) Subgroup of colleges

☐ (15) System-wide

ISSUE: 21. Career/technical programmes may not be flexible enough in instructional design and delivery.

Importance

Very Low ____________________ Very High

1	2	3	4	5
(0)	(2)	(10)	(8)	(2)

Impact

☐ (2) Institution Specific

☐ (5) Subgroup of colleges

☐ (13) System-wide

CAREER/TECHNICAL (cont'd)

ISSUE: 22. Certain of the specialized high technology programmes may find it difficult to attract well-prepared students.

Importance

Very Low ______________ Very High

1	2	3	4	5
0	2	5	11	4

Impact

☐ 6 Institution Specific

☐ 11 Subgroup of colleges

☐ 4 System-wide

ISSUE: 23. Rapid changes in technology may create an increasing need for faculty renewal and retraining and for curricular revision in order for career/technical programmes to remain current.

Importance

Very Low ______________ Very High

1	2	3	4	5
0	0	1	9	12

Impact

☐ 0 Institution Specific

☐ 1 Subgroup of colleges

☐ 21 System-wide

ISSUE: ____

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VOCATIONAL

ISSUE: 24. The shift towards employer-based training as reflected in the Canadian Jobs Strategy initiative may lead to a significant reorientation of the delivery of trades training.

Importance

Very Low ____________________ Very High

1	2	3	4	5
⓪	②	⓪	⑦	⑬

Impact

☐ ⓪ Institution Specific

☐ ② Subgroup of colleges

☐ ⑱ System-wide

ISSUE: 25. The federal decision to reduce CEIC seat purchases in vocational programmes may seriously alter the ongoing financial support for trades programmes.

Importance

Very Low ____________________ Very High

1	2	3	4	5
⓪	①	③	④	⑭

Impact

☐ ⓪ Institution Specific

☐ ② Subgroup of colleges

☐ ⑲ System-wide

ISSUE: 26. The apprenticeship system as a model of trades training may no longer function adequately to prepare young people for careers in the trades fields.

Importance

Very Low ____________________ Very High

1	2	3	4	5
⓪	⓪	③	⑪	⑧

Impact

☐ ⓪ Institution Specific

☐ ① Subgroup of colleges

☐ ㉑ System-wide

VOCATIONAL (cont'd)

ISSUE: 27. An uncertain economic environment and rapid technological changes may create a need to incorporate more generic level skills in trades training.

Importance

Very Low ________________ Very High

1	2	3	4	5
⓪	②	⑥	⑥	⑧

Impact

☐ ⓪ Institution Specific

☐ ② Subgroup of colleges

☐ ⑱ System-wide

ISSUE: 28. Rigid adherence to traditional programme delivery formats and college collective agreements may tend to outweigh the importance of employer and student needs in the consideration of new trades training alternatives.

Importance

Very Low ________________ Very High

1	2	3	4	5
⓪	②	④	⑨	⑦

Impact

☐ ⓪ Institution Specific

☐ ④ Subgroup of colleges

☐ ⑱ System-wide

ISSUE: 29. Centralized control of public colleges may restrict their ability to engage in cooperative ventures with the private sector.

Importance

Very Low ________________ Very High

1	2	3	4	5
⑤	⑦	④	④	①

Impact

☐ ⓪ Institution Specific

☐ ① Subgroup of colleges

☐ ⑬ System-wide

VOCATIONAL (cont'd)

ISSUE: 30. The lack of a clear statement of purpose for trades related programming may limit the ability of this sector of college programming to function adequately over the next few years.

Importance

Very Low ____________________ Very High

1	2	3	4	5
3	10	2	4	3

Impact

☐ 1 Institution Specific
☐ 1 Subgroup of colleges
☐ 9 System-wide

ISSUE: 31. The inability of trades instructors to maintain adequate industry contact may result in outdated instructional staff and curriculum.

Importance

Very Low ____________________ Very High

1	2	3	4	5
0	1	8	9	4

Impact

☐ 1 Institution Specific
☐ 6 Subgroup of colleges
☐ 15 System-wide

ISSUE: 32. Continued low levels of employer demand in certain trades fields may influence student demand in associated college-based trades programmes.

Importance

Very Low ____________________ Very High

1	2	3	4	5
0	2	3	7	10

Impact

☐ 1 Institution Specific
☐ 2 Subgroup of colleges
☐ 17 System-wide

VOCATIONAL (cont'd)

ISSUE: 33. Competency-based training in the trades may continue to present a challenge for colleges in terms of staff training, curriculum development, and capital resource utilization.

Importance

Very Low ____________________ Very High

1	2	3	4	5
⓪	①	⑥	⑧	⑦

Impact

☐ ① Institution Specific

☐ ④ Subgroup of colleges

☐ ⑰ System-wide

ISSUE: ____

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CONTINUING EDUCATION

ISSUE: 34. The emerging importance of part-time vocational and occupational upgrading may tend to blur the lines between full-time programmes and continuing education.

Importance

Very Low ____________________ Very High

1	2	3	4	5
0	3	3	11	5

Impact

☐ 0 Institution Specific

☐ 2 Subgroup of colleges

☐ 18 System-wide

ISSUE: 35. As part-time activity increases, the unequal treatment of students in cost recovery programmes and subsidized programmes may become increasingly contentious.

Importance

Very Low ____________________ Very High

1	2	3	4	5
0	5	4	7	6

Impact

☐ 0 Institution Specific

☐ 3 Subgroup of colleges

☐ 15 System-wide

ISSUE: 36. The proliferation of short-term training programmes such as those generated through Canadian Job Strategy contracts may increase the need to implement mechanisms of quality control.

Importance

Very Low ____________________ Very High

1	2	3	4	5
1	2	3	9	7

Impact

☐ 0 Institution Specific

☐ 4 Subgroup of colleges

☐ 17 System-wide

CONTINUING EDUCATION (cont'd)

ISSUE: 37. In order to be able to respond to industry specific requests and job strategy initiatives, increasing attention may need to be given to the importance of maintaining a viable infrastructure (core programmes, administration, support services) in the colleges.

Importance

Very Low ________________ Very High

1	2	3	4	5
①	②	⓪	⑨	⑩

Impact

☐ ⓪ Institution Specific

☐ ⓪ Subgroup of colleges

☐ ⑳ System-wide

ISSUE: 38. Retraining of the un- and under-employed may become an increasingly important challenge for the college system.

Importance

Very Low ________________ Very High

1	2	3	4	5
⓪	⓪	⑥	⑩	⑥

Impact

☐ ① Institution Specific

☐ ① Subgroup of colleges

☐ ⑳ System-wide

ISSUE: 39. Colleges may need to become even more creative and innovative in the design and delivery of part-time vocational and occupational upgrading in order to compete successfully with private sector educational alternatives.

Importance

Very Low ________________ Very High

1	2	3	4	5
⓪	①	⑥	⑧	⑦

Impact

☐ ① Institution Specific

☐ ⑤ Subgroup of colleges

☐ ⑮ System-wide

CONTINUING EDUCATION (cont'd)

ISSUE: 40. In an era of prolonged economic upheaval and uncertainty, the demand for part-time access to training and short-term occupational upgrading may tend to increase dramatically.

Importance

Very Low ________________ Very High

1	2	3	4	5
⓪	③	⑤	⑧	⑥

Impact

☐ ⓪ Institution Specific

☐ ① Subgroup of colleges

☐ ⑲ System-wide

ISSUE: ____

____

____

____

COMMUNITY SERVICES

ISSUE: 41. The community services role of colleges may become different for nonmetropolitan colleges than it will be for metropolitan colleges.

Importance

Very Low ________________ Very High

1	2	3	4	5
③	③	②	⑧	⑤

Impact

☐ ⓪ Institution Specific

☐ ⑭ Subgroup of colleges

☐ ③ System-wide

ISSUE: 42. As financial resources become more limited, it may be increasingly more difficult for colleges to maintain store front operations and regional centres in smaller communities.

Importance

Very Low ________________ Very High

1	2	3	4	5
⓪	②	④	⑦	⑧

Impact

☐ ③ Institution Specific

☐ ⑪ Subgroup of colleges

☐ ⑤ System-wide

ISSUE: 43. Colleges may become increasingly involved in establishing and coordinating community-based systems for the delivery of general interest programming.

Importance

Very Low ________________ Very High

1	2	3	4	5
②	⑨	⑤	③	②

Impact

☐ ① Institution Specific

☐ ⑥ Subgroup of colleges

☐ ⑦ System-wide

COMMUNITY SERVICES (cont'd)

ISSUE: 44. Community services activity in the colleges may shift from a focus on general interest programming to a focus on community related issues and events.

Importance

Very Low ______________ Very High

1 2 3 4 5

② ⑧ ⑥ ⑤ ①

Impact

☐ ③ Institution Specific

☐ ④ Subgroup of colleges

☐ ⑨ System-wide

ISSUE: 45. There may be a need to determine the role and extent of college involvement in local economic development initiatives.

Importance

Very Low ______________ Very High

1 2 3 4 5

⓪ ⓪ ⑦ ⑨ ⑥

Impact

☐ ③ Institution Specific

☐ ⑤ Subgroup of colleges

☐ ⑭ System-wide

ISSUE: ____

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ADULT BASIC EDUCATION

ISSUE: 46. Federal Immigration policies and college initiatives in international education may ensure the continued demand for Adult Basic Education and, more specifically, English Language Training.

Importance

Very Low ____________________ Very High

1	2	3	4	5
1	3	7	6	4

Impact

☐ 1 Institution Specific
☐ 12 Subgroup of colleges
☐ 6 System-wide

ISSUE: 47. The level of articulation between Adult Basic Education programmes on the one hand, and high school programmes and other college programmes on the other, may not be sufficient.

Importance

Very Low ____________________ Very High

1	2	3	4	5
1	6	3	9	2

Impact

☐ 0 Institution Specific
☐ 1 Subgroup of colleges
☐ 14 System-wide

ISSUE: 48. The relationship between the school districts and the colleges wit respect to the delivery of basic education to adults may not be clear.

Importance

Very Low ____________________ Very High

1	2	3	4	5
2	3	6	6	5

Impact

☐ 1 Institution Specific
☐ 3 Subgroup of colleges
☐ 15 System-wide

ADULT BASIC EDUCATION (cont'd)

ISSUE: 49. Adult Basic Education programmes may need to incorporate functional skills for the work environment as well as academically oriented objectives.

Importance

Very Low ________________ Very High

1	2	3	4	5
1	4	8	7	2

Impact

☐ 1 Institution Specific

☐ 1 Subgroup of colleges

☐ 17 System-wide

ISSUE: 50. Continued high levels of adult illiteracy may create a greater need for colleges to incorporate new instructional methods and technologies to facilitate learner effectiveness, increase student motivation, and enhance retention.

Importance

Very Low ________________ Very High

1	2	3	4	5
0	1	8	8	5

Impact

☐ 0 Institution Specific

☐ 1 Subgroup of colleges

☐ 20 System-wide

ISSUE: 51. There may be a need to reconfirm the province's continuing commitment to Adult Basic Education in light of the planned federal withdrawal of support for this level of programming.

Importance

Very Low ________________ Very High

1	2	3	4	5
0	1	4	7	10

Impact

☐ 0 Institution Specific

☐ 0 Subgroup of colleges

☐ 22 System-wide

ISSUE: ____

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STUDENT SUPPORT

ISSUE: 52. Limitations of financial resources for students may seriously undermine the accessibility to post-secondary education for increasingly larger numbers of students.

Importance

Very Low ________________ Very High

1	2	3	4	5
0	2	3	4	13

Impact

☐ 0 Institution Specific
☐ 0 Subgroup of colleges
☐ 21 System-wide

ISSUE: 53. Colleges may not be providing adequate leadership in the area of co-curricular activities.

Importance

Very Low ________________ Very High

1	2	3	4	5
4	8	6	3	1

Impact

☐ 4 Institution Specific
☐ 5 Subgroup of colleges
☐ 7 System-wide

ISSUE: 54. The microcomputer may become a necessary tool in support of instruction throughout the college.

Importance

Very Low ________________ Very High

1	2	3	4	5
1	1	2	8	10

Impact

☐ 0 Institution Specific
☐ 1 Subgroup of colleges
☐ 20 System-wide

STUDENT SUPPORT (cont'd)

ISSUE: 55. There may be a clear risk to the ongoing quality and standards in many programme areas as learning resources (libraries) continue to be under-funded.

Importance

Very Low ____________________ Very High

1	2	3	4	5
1	4	5	5	6

Impact

☐ 3 Institution Specific

☐ 2 Subgroup of colleges

☐ 13 System-wide

ISSUE: 56. Career guidance and employment information projection systems may not be very reliable in the current uncertain economic environment.

Importance

Very Low ____________________ Very High

1	2	3	4	5
4	2	5	6	5

Impact

☐ 0 Institution Specific

☐ 0 Subgroup of colleges

☐ 16 System-wide

ISSUE: 57. The advent of new information technologies may seriously alter the way libraries and other support services are used.

Importance

Very Low ____________________ Very High

1	2	3	4	5
0	1	5	10	6

Impact

☐ 1 Institution Specific

☐ 0 Subgroup of colleges

☐ 20 System-wide

STUDENT SUPPORT (cont'd)

ISSUE: 58. Adult Special Education initiatives may continue to need specially identified resources in order to survive.

Importance

Very Low ________________ Very High

1	2	3	4	5
1	0	5	12	3

Impact

☐ 0 Institution Specific

☐ 3 Subgroup of colleges

☐ 17 System-wide

ISSUE: 59. The levels of student counselling and programme advising may not be sufficient to meet current and future levels of demand.

Importance

Very Low ________________ Very High

1	2	3	4	5
0	4	8	5	4

Impact

☐ 2 Institution Specific

☐ 2 Subgroup of colleges

☐ 13 System-wide

ISSUE: ____

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OTHER

ISSUE: 60. The impact of new informational and instructional technologies may alter the way programmes are operated. Instructors may tend to become more like learning managers and tutors than teachers.

Importance

Very Low ______________ Very High

1	2	3	4	5
0	1	5	8	8

Impact

☐ 0 Institution Specific

☐ 1 Subgroup of colleges

☐ 20 System-wide

ISSUE: 61. The base level allocation of funds to support college programmes may continue to decrease relative to the special funds allocated to specifically identified projects and activities.

Importance

Very Low ______________ Very High

1	2	3	4	5
0	1	3	9	9

Impact

☐ 0 Institution Specific

☐ 0 Subgroup of colleges

☐ 21 System-wide

ISSUE: 62. The absence of a block grant funding system for major programme clusters may inhibit a college's ability to develop increased flexibility in the delivery of programmes.

Importance

Very Low ______________ Very High

1	2	3	4	5
0	10	2	5	4

Impact

☐ 1 Institution Specific

☐ 0 Subgroup of colleges

☐ 13 System-wide

OTHER (cont'd)

ISSUE: 63. Continued restraint in funding college operations may have a negative impact on a college's ability to operate effective programmes and services.

Importance

Very Low ____________________ Very High

1	2	3	4	5
0	1	1	9	9

Impact

☐ 0 Institution Specific

☐ 2 Subgroup of colleges

☐ 17 System-wide

ISSUE: 64. Alternative sources of revenue may become ever more important over the next few years.

Importance

Very Low ____________________ Very High

1	2	3	4	5
0	1	7	9	5

Impact

☐ 0 Institution Specific

☐ 2 Subgroup of colleges

☐ 20 System-wide

ISSUE: 65. Formula-funding may not be equitable in that the weightings and durations are inappropriately set.

Importance

Very Low ____________________ Very High

1	2	3	4	5
1	4	7	2	7

Impact

☐ 2 Institution Specific

☐ 1 Subgroup of colleges

☐ 15 System-wide

OTHER (cont'd)

ISSUE: 66. Pressures may increase to push colleges into partnerships with business, industry and the private sector to provide new training opportunities.

Importance

Very Low ________________ Very High

1	2	3	4	5
0	1	6	11	4

Impact

☐ 1 Institution Specific

☐ 1 Subgroup of colleges

☐ 19 System-wide

ISSUE: 67. Centralized governance and control over college operations may limit the colleges' ability to establish and deliver programmes to meet locally identified needs.

Importance

Very Low ________________ Very High

1	2	3	4	5
0	7	2	5	7

Impact

☐ 1 Institution Specific

☐ 2 Subgroup of colleges

☐ 14 System-wide

ISSUE: 68. The emergence of international education may gain an increasingly higher profile in the college system.

Importance

Very Low ________________ Very High

1	2	3	4	5
1	3	9	5	4

Impact

☐ 2 Institution Specific

☐ 7 Subgroup of colleges

☐ 10 System-wide

OTHER (cont'd)

ISSUE: 69. The roles of the various levels of government in terms of their respective responsibilities for post-secondary education in Canada may not be sufficiently clear.

Importance

Very Low ____________ Very High

1	2	3	4	5
①	③	⑨	④	⑤

Impact

☐ ⓪ Institution Specific
☐ ⓪ Subgroup of colleges
☐ ⑲ System-wide

ISSUE: 70. Human resource development may become an increasing area of concern as faculty and staff grow older and increasingly more remote from their students' point of view.

Importance

Very Low ____________ Very High

1	2	3	4	5
⓪	②	④	⑦	⑨

Impact

☐ ⓪ Institution Specific
☐ ⓪ Subgroup of colleges
☐ ⑳ System-wide

ISSUE: 71. The level of inter-institutional cooperation in the design and delivery of programmes may not be sufficient.

Importance

Very Low ____________ Very High

1	2	3	4	5
⓪	③	⑥	⑨	④

Impact

☐ ⓪ Institution Specific
☐ ⑥ Subgroup of colleges
☐ ⑬ System-wide

OTHER (cont'd)

ISSUE: 72. The value of strategic five-year planning as it relates to the programme planning process may not be well understood by all those working in the college system.

Importance

Very Low ____________ Very High

1	2	3	4	5
0	5	9	5	3

Impact

☐ 2 Institution Specific

☐ 2 Subgroup of colleges

☐ 14 System-wide

ISSUE: 73. The role of distance education alternatives may not be sufficiently clear.

Importance

Very Low ____________ Very High

1	2	3	4	5
0	3	8	8	3

Impact

☐ 2 Institution Specific

☐ 4 Subgroup of colleges

☐ 12 System-wide

ISSUE: 74. There may be an increasing need to recognize and plan for the place of the computer within all college programme areas.

Importance

Very Low ____________ Very High

1	2	3	4	5
0	0	7	9	6

Impact

☐ 1 Institution Specific

☐ 2 Subgroup of colleges

☐ 19 System-wide

ISSUE: ____

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APPENDIX IV

ROUND FOUR: PACKAGE OF MATERIALS

Date

Dear :

This is the final round in the four-round Delphi research project on: "Identifying the policy implications of emergent program issues in the British Columbia college system." At the end of the third round, twenty-two issues were identified as being of a very high level of importance. These issues have been used as the basis for the interview guide enclosed in the package. The issues have been arranged into seven issue categories to facilitate discussion.

I will be in touch with you shortly after you receive the package to set up an appointment for an interview sometime during the month of March or early April. The interview is anticipated to be 3/4 to 1-hour in length. With your permission, the interview will be conducted by telephone and taped for transcribing at a later time. All interview material will be handled with discretion and comments made will not be identified with particular individuals. If you are not comfortable with this arrangement in any way, please bring this to my attention when I contact you to arrange for the interview. I will do my best to accommodate your concerns to the best of my ability.

Thank you for your continued interest in the project and your significant contributions made to date.

Sincerely,

Don Tunstall
Ph.D. Candidate

JDT/dd
Encl.

IDENTIFYING THE POLICY IMPLICATIONS OF EMERGENT PROGRAMME ISSUES IN THE BRITISH COLUMBIA COLLEGE SYSTEM

ROUND FOUR INTERVIEW GUIDE

This is the fourth and final round in a four-round Delphi research project. In the previous rounds panel members have identified emerging programme issues, rated their potential importance and impact, and adjusted these ratings in light of the summarized data. The objective for this round is to discuss the strategies college planners might employ to address the issues that have been identified in these earlier rounds.

The fourth round is organized in an interview format. Twenty-two issues were identified in round three as having an importance rating of 4.0, or greater, on a 5-point scale. These issues have been organized into seven issue categories to facilitate the interview process. An interview question has been developed for each category. Panel members are asked to consider these questions at two levels; at the individual college level, and at the system level. Finally, panel members are asked to discuss the policy implications, if any, of the strategies they have identified.

INTERVIEW GUIDE

I. Impact of computers on college programming

Related Issues:

10 The influence of the computer may significantly alter the curriculum in many career/technical programmes.

54 The microcomputer may become a necessary tool in support of instruction throughout the college.

57 The advent of new information technologies may seriously alter the way libraries and other support services are used.

60 The impact of new informational and instructional technologies may alter the way programmes are operated. Instructors may tend to become more like learning managers and tutors than teachers.

74 There may be an increasing need to recognize and plan for the place of the computer within all college programme areas.

Interview questions:

What strategies might college planners/managers consider to plan for the impact of computers on college programming?

- at the individual college level?

- at the system level?

What are the implications for policy development?

INTERVIEW GUIDE

II. Student funding and access to college programming

Related Issues:

42 As financial resources become more limited, it may be increasingly more difficult for colleges to maintain store front operations and regional centres in smaller communities.

51 There may be a need to reconfirm the province's continuing commitment to Adult Basic Education in light of the planned Federal withdrawal of support for this level of programming.

52 Limitations of financial resources for students may seriously undermine the accessibility to post-secondary education for increasingly larger numbers of students.

63 Continued restraint in funding college operations may have a negative impact on a college's ability to operate effective programmes and services.

Interview questions:

What strategies might college planners/managers consider to facilitate student access to college programming?

- at the individual college level?

- at the system level?

What are the implications for policy development?

INTERVIEW GUIDE

III. Impact of changing employment markets on college programming

Related Issues:

19 New types of career programmes required in response to changing economic conditions, and lack of additional funds to start new programmes, may increase pressure for programme substitution.

24 The shift towards employer-based training as reflected in the Canadian Jobs Strategy initiative may lead to a significant reorientation of the delivery of trades training.

26 The apprenticeship system as a model of trades training may no longer function adequately to prepare young people for careers in the trades fields.

32 Continued low levels of employer demand in certain trades fields may influence student demand in associated college-based trades programmes.

38 Retraining of the un- and under-employed may become an increasingly important challenge for the college system.

Interview questions:

What adjustments might college planners/managers consider in order to cope with rapidly-changing employment markets?

- at the individual college level?

- at the system level?

What are the implications for policy development?

INTERVIEW GUIDE

IV. The need for faculty retraining and renewal

Related Issues:

23 Rapid changes in technology may create an increasing need for faculty renewal and retraining and for curricular revision in order for career/technical programmes to remain current.

33 Competency-based training in the trades may continue to present a challenge for colleges in terms of staff training, curriculum development, and capital resource utilization.

39 Colleges may need to become even more creative and innovative in the design and delivery of part-time vocational and occupational upgrading in order to compete successfully with private sector educational alternatives.

60 The impact of new informational and instructional technologies may alter the way programmes are operated. Instructors may tend to become more like learning managers and tutors than teachers.

70 Human resource development may become an increasing area of concern as faculty and staff grow older and increasingly more remote from their students' point of view.

Interview questions:

What strategies might college planners/managers employ to facilitate faculty retraining and renewal?

- at the individual college level?

- at the system level?

What are the implications for policy development?

INTERVIEW GUIDE

V. Erosion of base-funding relative to nonformula-funding

Related Issues:

25 The Federal decision to reduce CEIC seat purchases in vocational programmes may seriously alter the ongoing financial support for trades programmes.

37 In order to be able to respond to industry specific requests and job strategy initiatives, increasing attention may need to be given to the importance of maintaining a viable infrastructure (core programmes, administration, support services) in the colleges.

42 As financial resources become more limited, it may be increasingly more difficult for colleges to maintain store front operations and regional centres in smaller communities.

61 The base level allocation of funds to support college programmes may continue to decrease relative to the special funds allocated to specifically identified projects and activities.

63 Continued restraint in funding college operations may have a negative impact on a college's ability to operate effective programmes and services.

Interview questions:

What adjustments might college planners/managers consider to better cope with changing levels and sources of funding?

- at the individual college level?

- at the system level?

What are the implications for policy development?

INTERVIEW GUIDE

VI. Impact of technological change on college programming

Related Issues:

16 Equipment maintenance and replacement and the pace of change in high technology in the workplace may create major challenges for colleges, particularly in trades and career/technology programmes.

23 Rapid changes in technology may create an increasing need for faculty renewal and retraining and for curricular revision in order for career/technical programmes to remain current.

26 The apprenticeship system as a model of trades training may no longer function adequately to prepare young people for careers in the trades fields.

38 Retraining of the un- and under-employed may become an increasingly important challenge for the college system.

57 The advent of new information technologies may seriously alter the way libraries and other support services are used.

60 The impact of new informational and instructional technologies may alter the way programmes are operated. Instructors may tend to become more like learning managers and tutors than teachers.

Interview questions:

What strategies might college planners/managers consider to plan for the impact of technological change on college programming?

- at the individual college level?

- at the system level?

What are the implications for policy development?

INTERVIEW GUIDE

VII. Impact of changing Federal priorities for funding training

Related issues:

24 The shift towards employer-based training as reflected in the Canadian Jobs Strategy initiative may lead to a significant reorientation of the delivery of trades training.

25 The Federal decision to reduce CEIC seat purchases in vocational programmes may seriously alter the ongoing financial support for trades programmes.

39 Colleges may need to become even more creative and innovative in the design and delivery of part-time vocational and occupational upgrading in order to compete successfully with private sector educational alternatives.

51 There may be a need to reconfirm the province's continuing commitment to Adult Basic Education in light of the planned Federal withdrawal of support for this level of programming.

Interview questions:

What adjustments might college planners/managers consider in order to cope with changing Federal priorities for funding training?

- at the individual college level?

- at the system level?

What are the implications for policy development?

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